THIS MONTH'S LIST: 176 WORLDGROUP CLIENT/SERVER SYSTEMS · NOVEMBER 1995

BOARDWATCH MAGAZINE

Guide to Electronic Bulletin Boa[illegible]nd The Internet

CONNECTED

WINDOWS '95 CONNECTIVITY
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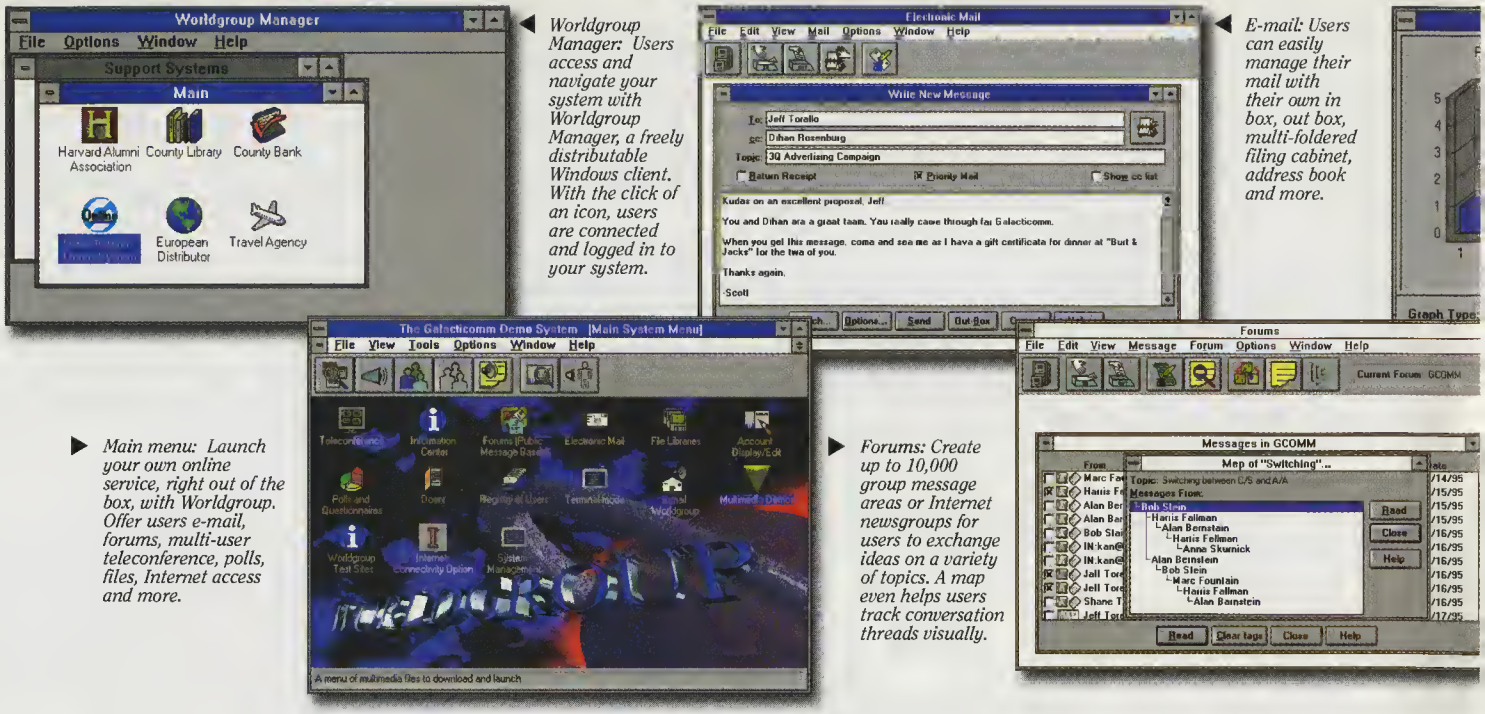
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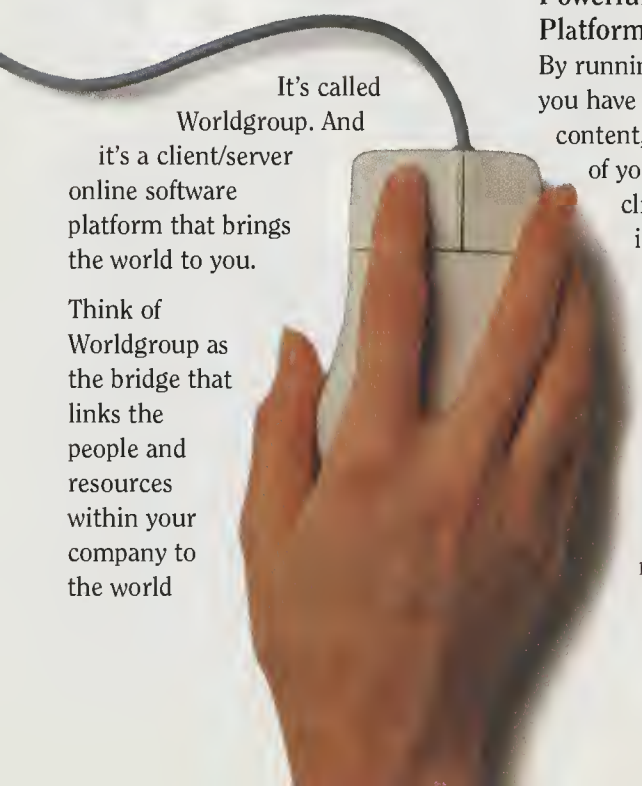
Main menu: Launch your own online service, right out of the box, with Worldgroup. Offer users e-mail, forums, multi-user teleconference, polls, files, Internet access and more.

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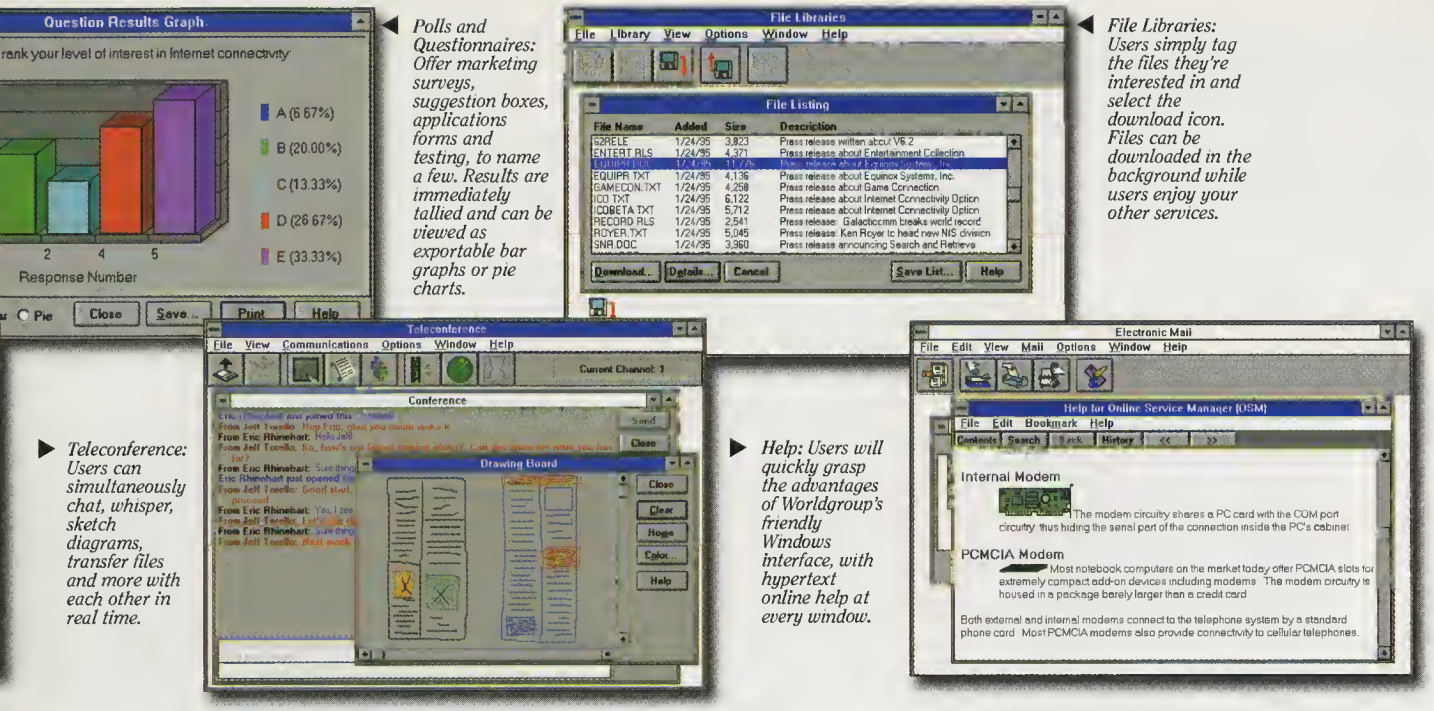
By running your own online service, you have 100% control over the content, presentation and revenue of your system. And Worldgroup's client/server approach makes it easy for anyone to use.

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You can customize all the icons and menu pages out of the box. With Worldgroup's multimedia features, you can have a "splash" screen with a BMP image and a WAV or MIDI file, graphic menu backdrops, real-time video and more.

There's even a "launch" client/server utility that downloads and launches files for your users, such as Adobe Acrobat files, Word documents and PowerPoint presentations, in one easy step — while the user is online.

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Editor/Publisher

Jack Rickard

Editor-at-Fault

David Hakala

Contributing Writers

Chris Babb
L. Detweiler
John C. Dvorak
Michael Erwin
Bill Gram-Reefer
Durant Imboden
Ric Manning
Phyllis Phlegar
Bob Rankin
Rea Redd
Lance Rose
Andrew Selman
Doug Shaker
Forrest Stroud
Jim Thompson
Wallace Wang
Jim Warren

Graphic Design and Production

Marla Asheim
James Kovac

Production Manager

Jack Kramer

Subscriptions/Circulation

Patti Burnett
Cathy Rougier

Technical Operations

Gary Funk

Circulation Director

Brian Noto

Gentle Reminder

Donny Yoshida

Advertising Director

Roger Mertes

Advertising Sales

Curtis Claar
Tom Fenlon
Dave Fowler

Editorial Offices

8500 W. Bowles Ave., Suite 210
Littleton, CO 80123
(303)973-6038 Editorial
(303)973-3731 Fax
(303)973-4222 BBS
(800)933-6038 Subscriptions
http://www.boardwatch.com

Electronic Mail

Internet:
jack.rickard@boardwatch.com
subscriptions@boardwatch.com

FidoNet: **1:104/555**

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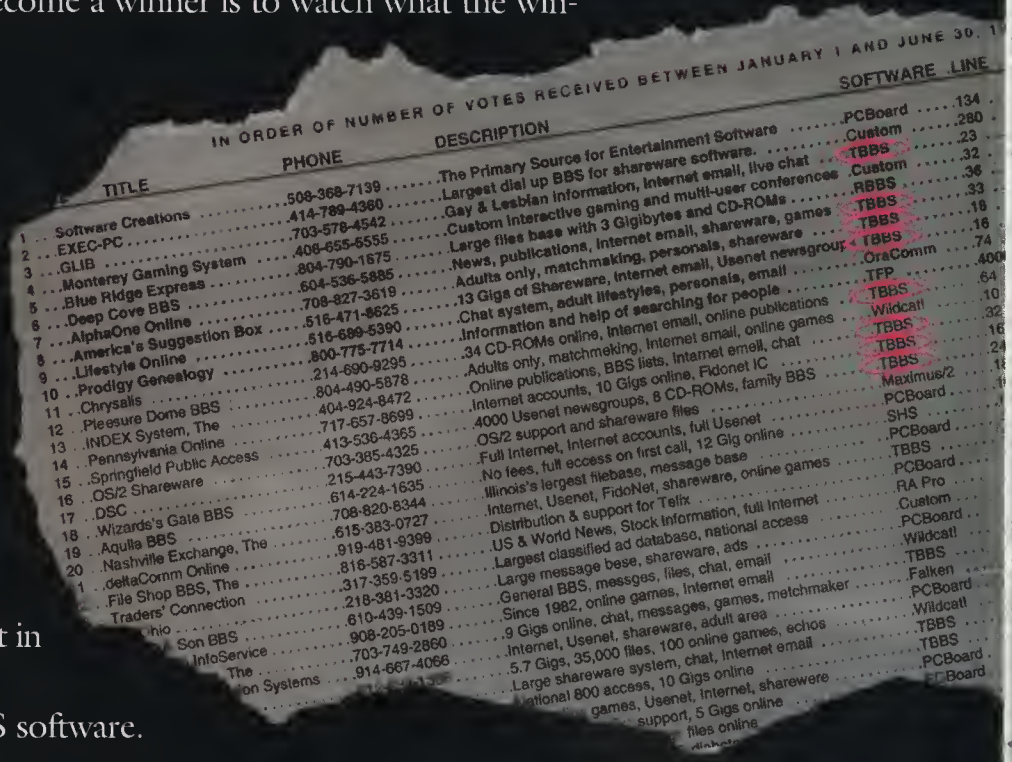
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	TITLE	PHONE	DESCRIPTION	SOFTWARE	LINE
1	Software Creations	508-368-7139	The Primary Source for Entertainment Software	PCBoard	134
2	EXEC-PC	414-789-4360	Largest dial up BBS for shareware software.	Custom	280
3	GLIB	703-578-4542	Gay & Lesbian information, Internet email, live chat	TBBS	23
4	Monterey Gaming System	408-655-5555	Custom interactive gaming and multi-user conferences	Custom	32
5	Blue Ridge Express	804-790-1675	Large files base with 3 Gigibytes and CD-ROMs	RBBS	36
6	Deep Cove BBS	604-536-5885	News, publications, Internet email, shareware, games	TBBS	33
7	AlphaOne Online	708-827-3619	Adults only, matchmaking, personals, shareware	TBBS	16
8	America's Suggestion Box	516-471-8625	13 Gigs of Shareware, Internet email, Usenet newsgroup	TBBS	16
9	Lifestyle Online	516-689-5390	Chat system, adult lifestyles, personals, email	OraComm	74
10	Prodigy Genealogy	800-775-7714	Information and help of searching for people	TFP	400
11	Chrysalis	214-690-9295	Adults only, matchmeking, Internet email, online publications	TBBS	64
12	Pleasure Dome BBS	804-490-5878	34 CD-ROMs online, Internet email, online games	Wildcat!	10
13	INDEX System, The	404-924-8472	Online publications, BBS lists, Internet email, chat	TBBS	32
14	Pennsylvania Online	717-657-8699	Internet accounts, 10 Gigs online, Fidonet IC	TBBS	16
15	Springfield Public Access	413-536-4365	4000 Usenet newsgroups, 8 CD-ROMs, family BBS	TBBS	24
16	OS/2 Shareware	703-385-4325	OS/2 support and shareware files	Maximus/2	16
17	DSC	215-443-7390	Full Internet, Internet accounts, full Usenet	PCBoard	18
18	Wizards's Gate BBS	614-224-1635	No fees, full eccess on first call, 12 Gig online	SHS	
19	Aquila BBS	708-820-8344	Illinois's largest filebase, message base	PCBoard	
20	Nashville Exchange, The	615-383-0727	Internet, Usenet, FidoNet, shareware, online games	TBBS	
1	deltaComm Online	919-481-9399	Distribution & support for Telix	PCBoard	
	File Shop BBS, The	816-587-3311	US & World News, Stock Information, full Internet	RA Pro	
	Traders' Connection	317-359-5199	Largest classified ad database, national access	Custom	
	hio	218-381-3320	Large message base, shareware, ads	PCBoard	
	Son BBS	610-439-1509	General BBS, messges, files, chat, email	Wildcat!	
	InfoService	908-205-0189	Since 1982, online games, Internet email	TBBS	
	The	703-749-2860	9 Gigs online, chat, messages, games, metchmaker	Falken	
	on Systems	914-667-4066	Internet, Usenet, shareware, adult area	PCBoard	
			5.7 Gigs, 35,000 files, 100 online games, echos	Wildcat!	
			Large shareware system, chat, Internet email	TBBS	
			ational 800 access, 10 Gigs online	TBBS	
			games, Usenet, Internet, sharewere	PCBoard	
			support, 5 Gigs online	Board	
			files online		

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However, if you focus on giving callers what they want, the choice is easy – Winners run TBBS, and their callers love them for it. If winning is your goal, call (303) 699-6565 for more information and access to a demonstration system.



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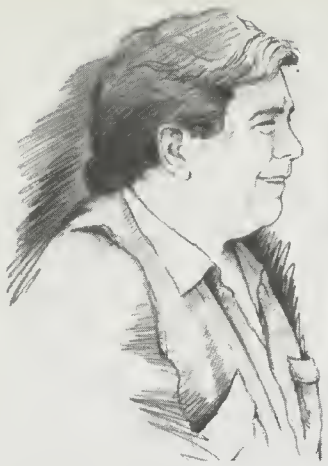
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EDITOR'S NOTES

SECURITY PARADOX REDUX AND THE LOOMING MENACE OF MONSTER INTERNET PROVIDERS FROM THE DEEP (POCKETS)

This issue we begin examining Windows95 as a tool to access the Internet. We were probably the first publication last year to note that you could run WindowsNT usefully as a server on the Internet for mail, World Wide Web, and other tasks and in the interim it has emerged as the platform of choice for small organizations and individuals discouraged at the thought of putting up **$50,000** worth of Sun hardware and software just to have a web site they can control and operate usefully.

In this issue, we begin to look at Windows95 from the other perspective - a user client to access services on the Internet. And we find it surprisingly capable. Basically, all the tools to make a dial-up connection to any Internet service provider, competently cruise the World Wide Web, and send and receive electronic mail globally through the matrix, are now built into the operating system. And despite the keening and lamentation of the cynics, we believe Win95 will take over the majority of personal computing within two years. It finally heralds an era of using personal computers as communication devices as opposed to "computing" or office equipment tasks. And ultimately, it will allow an entirely new circle of the body politic to go online - perhaps doubling again the number of people in the online community.

There remain two small "misunderstandings" I feel compelled to comment on - one again, and the other for the first time. The first is the concept of "security."

My April editorial was titled "The Security Paradox." It was in reference to the Kevin Mitnick hack into The WELL and Colorado SuperNet. The gist of the editorial was that with no security measures beyond the "locked car" analogy, you had already achieved the maximum security possible. And further, that anything you did beyond that actually DECREASED the level of security you might otherwise enjoy. Consultants and software companies are infamous for offering airtight security features that time and time again lure companies and individuals into a FALSE sense of security. Encryption and security schemes always sound wonderful when proposed and usually just as good when implemented. Once they are broken, and the damage done, they have no value whatsoever. And if you entrust company private information to them, and you lose the lottery, you can lose in rather grand fashion. The Internet, and the entire online community, is a PUBLIC thoroughfare. If you want security, unplug your computer from the network at a minimum. And if you want REAL security, bury it a couple of hundred feet underground in a vault - with no keyboard and no monitor.

This month, we've seen an illustration of this at work again. Netscape had proposed to sell a solution to an entirely non-existent problem - credit card security over the network. They actually DID sell several large banking entities on the RSA encryption in their Netscape browser and the enhanced server they sell to match it.

I found fault with the entire concept. Many of us use credit cards routinely. And on an almost daily basis I blithely hand mine to any minimum wage store clerk I can find to buy whatever it is that has caught my recent fancy. They can charge my purchase and move on. Or they can copy the credit card number and expiration date and go buy Manhattan. And in fact, 99% of all "security" problems companies face, either with money or with company private data, arise from employees of the company itself. There is a certain amount of fraud, and consumers are largely protected from these losses. The banking network also suffers a certain amount of fraud, virtually always from credit card merchants. And the fraud is both traceable and actionable.

But there is something terrifying about the Internet in the amount of data that transits the pipes. And Netscape has done an artful job of offering a solution to this non-problem. So much so, that they recently completed an enormously successful stock offering. But this month, two U.C. Berkeley students, Ian Goldberg and David Wagner, demonstrated how to break the Netscape security scheme in about a minute. While the 128-bit RSA keys Netscape used to encrypt the data (in the U.S. version anyway) would normally require a huge deployment of computer power for an unacceptable length of time to break, the keys were actually generated using about 30 items of random information from the computer, based on times, files, system settings, etc. So you don't have to search every possible combination to break the scheme, rather, a handful of them. Once again we learn that a security system is only as strong as its weakest link.

The point I might make is that we did NOT lose hundreds of billions of dollars in a massive fraud scheme that brought our entire financial structure to its knees and set off a panic in financial markets triggering a world wide depression. Two hackers from U.C. Berkeley won a "trophy" for doing a good hack. This is the claim made by hackers for many years, that they accomplish a needed end by pointing out flaws in systems. Those who have their flaws pointed out are vehement in denying any good can come of this, and generally want to kill the messenger, or at least have them "punished" via the legal system. A number of them have been, always having caused little but imagined damage to systems, though often serious damage to the egos and careers of system administrators. This is almost a pure case of breaking the system without actually causing any harm - and publicizing it before harm could be done.

Again, a 128-bit RSA encryption scheme was widely allowed as unassailable. It wasn't. It is broken. Netscape claims that by increasing the 30 items of random information to 300, they can "fix" the security problem. They can't. First, it isn't a problem. And second, if it is, this doesn't necessarily fix it. In most cases, there is still a minimum-wage employee at the other end "processing" the credit card charges. And there may well be other "weak" links along the chain. The normal process in security software is to publish the algorithms and undergo a kind of peer review process where people DO try to find the weak links. Netscape, for proprietary reasons, foregoes this step.

But if they didn't, this information will still transit a public thoroughfare. And we will all be safest if we assume that anyone with a computer, anywhere on the planet, can view it as easily as reading their e-mail. That is the maximum security achievable. And anything you do to enhance it, will automatically degrade it by lulling you into the belief that it is safe. It isn't. And I don't believe there is a technological solution that will ever make it safe. If someone near you makes noises to the contrary, keep your hand on your wallet. You're about to suffer a financial security assault.

The other item I would care to comment on regards the Internet Service Provider market. It has gone entirely without question that this market somehow "belongs" to MCI, Sprint, AT&T, IBM, and other assorted entities of enormous resource that will ultimately squash all the little guys and take the purveyance of Internet connectivity away from them. I have found NO ONE to offer a counter argument. It is universal-

ly common knowledge. The second tier ISPs, such as UUNET, Netcom, Colorado SuperNet, and PSI, believe it utterly. The smaller ISPs all buy into it as well - make a buck now while you can, and find some way into something they refer to as "value-added" if you want to survive.

That's not the consensus, it is unanimous. Ok, there IS one holdout. Me. I don't believe it at all. I've held my peace on this because it has been a very transitional time, there is a lot of energy, money, fad aspects, and near chaos driving all of this. But it isn't going to happen.

In the past year, we've watched the number of small Internet Service Providers grow from less than a hundred, to very nearly 2500 across the United States. And almost all are profitable at some level, some of them fabulously so. Netcom reached 100,000 subscribers in March, and 200,000 in September. I'm almost daily asked if BBS operators are going the way of the dinosaur and will become obsolete. But most of the energy I see in the Internet and World Wide Web seems to come from some very familiar names. I recently took a look at Orlando Florida, by accident, and found some 20 Internet Service Providers in operation. Virtually ALL of them were running a BBS a year ago and over half of them STILL DO! They use it as a customer service forum for their SLIP/PPP accounts. Tom Jennings, author of Fido BBS in 1984, runs The Little Garden, a fabulously successful ISP in the Bay area. Similarly, George Peace, Fidonet Coordinator for the planet, in Pennyslvannia, Kevin Behrens in Chicago, Adam Hudson, author of QuickBBS, in Denver - BBS operators we've known for years are all operating small Internet Service Provider companies all over the country.

And customer service IS the heart of the matter. Sprint and MCI BOTH announced the availability of low-cost SLIP/PPP dial-up accounts for consumers OVER A YEAR AGO. Neither has gotten off the ground with them. MCI is suffering backbone "brownouts" and complaining bitterly that all the other ISPs are using their backbone unfairly. Sprint has set up a very strange backbone of feudal lords and lordettes each with their own router and territory. They've sold a LOT of T1 connections, made little money at it, and are currently still under a cloud within the larger corporation. It would appear the majors have a major problem operating their business at the backbone level and selling large pipes to second and third and fourth tier Internet Service Providers.

SLIP/PPP dial-up accounts? Forget it. Forget it for years. New subscribers require a certain amount of customer service to get up and running. Not all of them, and usually only when they first get started, but enough of them to make it a headache. Telephone companies are accustomed to a very binary form of customer service. Your voice phone either 1. Works and you never contact them at all or 2. Doesn't work at all and you contact them. If it doesn't work, they take the call, and someone fixes it. You never hear from them again. The phone just starts working.

There are occasional billing problems, which anyone on the planet can be trained to handle in fairly short order. But try this: call the phone company, either the long distance company or a local telephone company, it doesn't matter. Tell them you get a dial tone and can call people, but sometimes the sound is a little "off." Or when dialing the east coast, it seems like the bass is a little whiney. BBS operators who have complained about "noisy" lines often have to fight with the telco for YEARS to get them to even verify that there is a problem. They just aren't set up to deal with such issues. It works. Or it doesn't work.

Cable Companies delivering TCP/IP to consumers? Get out of town. They don't even fix the cable problems until they get enough trouble calls to plot a pattern on a map so they can locate the problem. They troubleshoot by statistically plotting complaints!

The small ISPs are doing a lot of business with deals in the **$15** to **$20** per month range for 30, 40, or even 50 hours of connection - typically **$2** per hour after that for the net hogs. In exchange, they let you download free software from their bulletin boards, confer via BBS with other users on various problems you encounter, and yes, with the smaller ones you could even call voice and get a sysop to walk you through a winsock installation. Or configure your e-mail program to work with their POP3 server. They do it as a matter of course. It's what they've always done - help others get online.

Even the larger ISPs and commercial online services simply can't do the product support function. Prodigy walks you through an automated voice service that continually urges you to get on the system electronically for support. A source inside the company confides "We just can't walk people through winsock to get them on the Internet. It's not practical."

Large entities cannot deliver Internet connections to consumers until the technology is such that you can truly plug in a wire and it either "works" or it "doesn't work" just like an analog telephone set. The migration of TCP/IP into the Microsoft Windows95 operating system is a huge gain, but as you can see from our Windows95 Connected article in this issue, the longest tutorial article we've ever done in Boardwatch by the way, it is a little shy of plug-and-play.

Until it IS plug and play, it will be smaller Internet Service Providers that can offer dial-up Internet connectivity to consumers and small businesses. Period. The only large entity we can see doing this usefully IS in fact Microsoft. With all the hoopla over the product support problems they have with millions of new Windows95 users, I did call with a file format conversion question about the new Word 7.0. I was amazed to get through to a humanoid within minutes, and a knowledgeable one at that who walked me right through a setup to install a Word 2.0 filter.



But generally, all the BBS operators who were struggling to make a small BBS into a paying business, have a new area of opportunity in offering SLIP/PPP dial-up connections. They are struggling to master new software and hardware tools to do this, but on the whole seem to be winning the battle, and the tools grow more capable and less expensive each day. They can do the product support for a few hundred to a few thousand subscribers, and offer services very economically and profitably at **$15** or **$20** per month per subscriber. I don't buy into the concept that Sprint and MCI can touch them - certainly not until the technology matures, and probably not for many years. They can sell larger pipes TO the small Internet Service Providers, and probably profitably. The BBS operator/Internet Service Provider would then actually BE the customer support force for them.

It would appear you can play the ISP game at any level you like: large backbone provider, second tier large Internet Service Provider, small regional ISP, or even a BBS that offers SLIP/PPP connections. But you can't play at all levels. You have to pick one. Vertical integration just doesn't look viable or scaleable. Specialization seems to be the key. Pick small businesses and hook them up. Pick large businesses and hook THEM up. Pick consumers and hook them up. But you have to pick. And for the next few years, I think we'll see the 2500 current Internet Service Providers double, triple, and double again.

The question that will be posed is "how many Internet Service Providers can the market possibly support?" I find it ironic that Bob Hartman, at Fidocon90, asked me precisely that question then. Oh yeah, it was about bulletin boards, not Internet Service Providers. And we never have found the answer.

In keeping with the utterly dispersed chaotic grass-roots nature of online communications itself, no one will ever be "squeezed out" from the top. But a lot of people may be squeezed out - from the bottom.

Jack Rickard
Editor Rotundus



LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, Boardwatch Magazine, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123; by fax to (303)973-3731 or by e-mail to letters@boardwatch.com

CHURCH OF SCIENTOLOGY

Finnish Police Contact info and more.

I work at the Helsinki Police Criminal Investigating Department in Helsinki. I investigate economic crimes and crimes that involves the use of a computers. Helsinki Police Department is the local police.

Interpol is not a police organization. Most of the countries in the world have joined Interpol and therefore assign a part of its organization to be called Interpol. Interpol does not investigate crimes nore execute any police duties. It only sends mail from one country to another and keep registers. If I want to send a letter to a law enforcement agency in another country, I send it to our local Interpol, that sends it to the other country and to its Interpol agency, that in turn sends it to the local police. Interpol never has an active part in investigating crimes.

This Scientology case started on day when a lawyer from a very respected law office contacted us and said he was representing the Church of Scientology and that he had in his office a private investigator from the United States that had come here to investigate on behalf of the church.

They came to my office in Helsinki and told me that someone had penetrated in to a computer in Los Angeles and taken secret information form it. The computer was the property of the Church of Scientology.

The investigator had found out that the penetrator had come into the computer from Finland and their last information about the person ended at the Anon Penet computer in Helsinki.

I was asked by the Church of Scientology to start an investigation because a crime had been committed. They told me that Johan Helsingius at Eunet Finland did not give them the information they needed, the identity of the person who had committed the crime.

We took the case under consideration with my boss Harri Pulkkinen. He has the authority to issue a search warrant by law in Finland.

A search warrant can be issued if there are reasons to believe that a crime has been committed, a crime that you can get at least a 6 months prison sentence for, and that there are reasons to believe that evidence in that particular case can be found in the place where the search will be held.

A crime had been reported, evidence to solve the crime could be found. The only thing we could do was to get the information from the Anon server. A search warrant was issued and it was served to Johan Helsingius. Without us searching the hole computer, Helsingius gave us the information we wanted.

When I got the information from Helsingius, I could see that the crime had been committed from the United States. I had seen a document that showed me that there was an investigation about the same case in Los Angeles.

As there was an investigation going on in the United States and it the crime had been commited from there we decided to end our investigation. I wrote a letter ot our Interpol and asked them to forward our findings to the police in Los Angeles.

I gave the results of our investigation to the person who had reported the crime, the finnish lawyer.

That was it. I do not know what has happened after that in Los Angeles to the investigation there. Police organizations do not report to other countries their results.

If someone reports a crime we must act. We do not have the right to refuse an investigation if there are reasons to believe, that a crime has been committed, if we did we would end up in jail.———

As we the investigation has come an end, all documents are public. Anyone has the wright to get copies. You only have to pay a small sum for copying them. I cannot send them by the Internet but if someone in Finland got them from our office, that person could send them to everyone on the net.

My office telephone: **+358-0-189 5425**. I work from **8 - 16 (+3 GMT)**. My office mail: **kaj.malmberg@helsinki.poliisi.mailnet.fi**.

Mr. Malmberg:

Just doin' our job ma'am.

Joe Friday

◆ ◆ ◆

EDIT!

Jack:

I admire your plucky magazine and your iconoclastic approach to editing. BUT, don't you think the time has come to shed a few dollars and hire a copy editor? The typos in each issue of Boardwatch are enough to cross one's eyeballs. You have a good product — make it better, edit it.. Best wishes,

John Rouse
Capital-Gazette Communications
Bowie, Md. 20715
jrouse@dc.infi.net

John:

You make a good point. We've tried various things, but we generally get a little rushed at the end. Oddly, almost all the critical comments about our typos come from editors or others in the publishing industry. We'll try to do better, but it's been a battle for years. I'm not terribly optimistic.

Jack Rickard

BOARDWATCH MAGAZINE

Please count this message among the legion you already have, expressing my satisfaction and even genuine excitement over your magazine! I watch my mailbox every month for the next issue. Boardwatch, to me, is news, opinion and teaching platform all rolled together.

My first (and everlasting) impression of what's between the covers is one of "pragmatic candor". You surround yourself with people who actually reason things out. Then it's all presented to enthusiastic plodders like me to nod over, wrestle with, and discover through... Every article has real value, every opinion impacts me as honest, and the authors behind every word make sense. If there is an agenda advanced here I would have to suspect "freedom of choice" beat's the hell out of whatever is in second place.

Not only do I choose Boardwatch as my guide in all things internet and web related I have also made it a "favorite" link on my opening home page. Thanks for the attitude expressed so well throughout the pages of Boardwatch that says to all of us: "an open mind, well tempered with self-appraising honesty, is still alive and well in the world".

Joe Treadway

Atlanta, GA
on-trac@mindspring.com
Delivered via WebSite

Joe:

Thanks for the note of encouragement. That's kind of how we see it too. And thanks for "linking us in" to your part of the web.

Jack Rickard

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MUD HUTS

Was this necessary?

"We could declare a mud hut in Nigeria to be The Internet, and if we can connect to it, and connect anyone who wants to be connected to it to us, then the heart of the Internet becomes a mud hut in Nigeria - about as easily as it can be a CIX or an NSFNet backbone. "

Was this comment really necessary? Do you personally know of anyone living in "mud huts" in Nigeria? Granted, your article was well written and very educational, however, that piece about the mud huts smacks of racism (institutional, or otherwise).

I've been reading your stuff for a while and I think you know better than that.

Rod Brathwaite
rod@mtgbcs.att.com

Mr. Brathwaite:

I'm lost again. First, we didn't say anyone LIVED in a mud hut in Nigeria. We said if we declared a mud hut in Nigeria to be the heart of the Internet, it so became - the we being the more generalized body politic on the Internet. Actually I DO personally know of people living in mud huts in Nigeria, and elsewhere, but I gather that's not your point. If we do believe there are people in Nigeria living in mud huts, this is a sign of institutional or otherwise racism? How so?

Further, no it was not necessary. There is nothing in Boardwatch Magazine that is necessary. All contents are entirely optional, and indeed, elective. I frankly do not mind disparaging either groups or individuals pretty much as the mood strikes. In this particular case, I was disparaging CIX, not Nigeria, not huts, and not those living or working in them. I might understand some umbrage if we tied those in the huts too closely with CIX membership, but I think we stopped short of that. In any event, I did NOT mean to imply or to attempt to stereotype all those who occupy mud huts in Nigeria as CIX members. Broadly, to my knowledge they are NOT CIX members, and no disparagement of Nigeria or of those who live in mud huts elsewhere was intended.

Jack Rickard

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PC BOARD SUPPORT

Jack,

I too have been running PCBoard for a few years now and have had poor results with technical help from Clark Development. Until recently, I had no other way to contact them other than via the Tech Support phone number, and their BBS, Salt Air. To get an update, it was required to connect to the Salt Air BBS (usually impossible) or get them to send an update via snail mail, for a fee. Then when your tech support time is over... good luck! Sure they have a great package, but for the price, it should work better. Their tech support should also be improved upon, and I understand that no one is perfect.

What about the new BBS package "DarkStar"? I don't see much information in any of the BBS related publications, but I do understand, from talking with them on the phone, that the newest version will be released really soon. It is currently in Beta testing, but as soon as this issue of BoardWatch reaches the newsstands, it should be out. A multimedia and graphical user interface for a DOS-based BBS, that works somewhat like Web (HTML) Pages. It will be interesting to see the reviews, if you choose to provide one.

Thanks for providing our community with such a wonderful publication. You get better every year, and I'm renewing my subscription so I don't miss an issue of it.

Rick Winslow, Sysop
A Bit of Maine BBS
rickw@midcoast.com

Rick:

Well.... yes. I agree I think. All software should work better and have better support. And it should all be released real soon now - probably by the time you read this.

DarkStar has some interesting features but has struggled to get off the ground with a user base and an actual release. Some of this software has entered into an area where they can do a great deal with a little bit of code, and then it takes a LOT of work to actually get all the imagined bells and whistles to work. As it becomes more complex, getting all of it in a box and actually shipped gets harder. Windows95 was actually released about a year after initially planned so I suppose it's not just BBS software.

Jack Rickard

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INTERNET COVERAGE

Jack,

I have been a subscriber for about a year. In my not-so-humble opinion, I think you have as good a publication as anybody, and far better and more informative than most. Since I am not a sysop, much of your earlier stuff on setting up and operating BBs has been of only passing interest to me. In the Washington DC area, we have always had more than enough BB's and I have never been tempted to set up my own.

Your increasing coverage of the Internet, on the other hand, is more than welcome and of considerable interest. I have had limited Internet access for about two years through our local freenet. As long as all I wanted was e-mail, it was good enough. Since I had no graphics capability, your articles on graphics viewers and the web were of academic interest only since I couldn't use them.

A couple of months ago I finally subscribed to the service provided through Capital PC Users Group. (This is obviously also a plug for that organization, which has been of more help to me and others than I could possibly describe). I have a shell account, which, together with TIA, allows me full use of graphic web viewers. I installed Netscape and found that, while it is excellent, the auxiliary packages which came with it, particularly telnet, are not good. As if you were reading my mind, the July issue contained the script which allows me to use Procomm as my telnet app, and the August issue walked me though all of the nuances of Trumpet Winsock. I don't think I have seen any mention or writeup of the Procomm script anywhere else. Many many thanks for both.

It looks like past copies of Boardwatch are going to be added to my ever-growing stack of old magazines which I can't bear to throw away.

Dick Bellin
rbellin@cpcug.org
Washington DC

Dick:

I'm pleased we are hitting the mark in Washington. The Procomm Script was not really a product feature of Procomm. We were playing with Netscape and trying to get it to work with something, anything with a telnet function that would offer something beyond the raw telnet terminal. Procomm had telnet built in, but we couldn't get it to take a parameter from Netscape. We called Procomm and one of their script gurus whipped it out in about an afternoon.

Mustang Software has since released QmodemPro for Windows95. It doesn't need a script AT ALL to perform the same feat. You can simply configure Netscape with the path to the program and the TELNET label and it will do the whole trick by itself.

I'm going to guess that the Web interface will generally relegate telnet to the role of historical detritus rather soon. But until it does, it is very nice to use full function terminal programs over the Internet to login to bulletin boards so connected.

Jack Rickard

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UNIVERSAL LIFE CHURCH HOME PAGE (WE ARE READY FOR YOU)

Gentlemen:

My name is Daniel R. Zimmerman and I have been a member of the Universal Life Church for more than twenty-five years and a member of the HQ staff since 1980 and there is something I would like to share with you.

First: YES, we are the church that was called the "Mother of all Mail-Order Ministries," and we have ordained cats and dogs and plants.

Secondly: YES, we have had many battles with the government, especially the IRS, in

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Annihilator takes full advantage of the new multitasking in Windows 95 or the robust server operations in Windows NT to provide a solution that brings full on-line multimedia to every caller. See how you can use *Annihilator's* built-in remote graphics to provide an exciting multimedia greeting, using familiar JPEG and GIF graphic editors to customize the caller interface.

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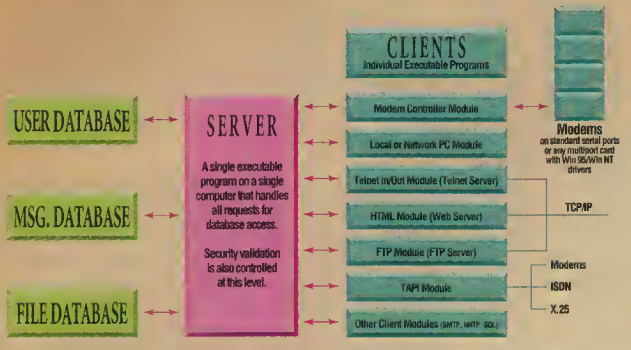
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The *Annihilator* Preview CD will show you how a SYSOP can offer a BBS on a desktop platform with the expansion capability to run any size on-line service.

- 32-bit Windows multitasking means no additional multitasking software is needed and 16-32 lines can be run easily without loading multiple copies of the BBS.
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Of 32-bit BBS Much Longer

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The client/server model of Annihilator can be easily installed with the server and all clients running on a single PC. The computer can operate under Windows 95 or Windows NT Workstation or Server. This configuration offers the most compact system and allows for total management from the single BBS computer.

Build A Powerful New BBS With *Annihilator* Server And Client Modules

Standard *Annihilator* modules included with every BBS create a foundation for the new client/server BBS:

Server Module – functionality for processing all database and configuration requests and operational characteristics of the BBS.

Local Client – a fully graphical connection for anyone connecting at the host PC or over a LAN.

Modem Client – answers the phone for all dial-in lines and presents the BBS in ANSI, ASCII or in full graphics.

QWK Client – handles QWK mail exchange between the host and other BBSs.

TAPI Client – provides a link to the Windows Telephony Application Program Interface and a mechanism for ISDN, X.25 and other connectivity.

Graphical Remote Client – a set of freely-distributed Windows programs for callers to experience full multimedia when connected. This 16-bit program suite operates on Windows 3.1, Windows 95, Windows NT and any OS/2 release with Windows support.

Optional Annihilator modules increase the power of a client/server BBS:

UUCP Client – handles dial-up Internet e-mail and newsgroup support.

Internet Package – accessories to handle TCP/IP support: Telnet Module, FTP Module, WWW Module, IRC Module, SMTP Module and NNTP Module.

MAPI Client – a mechanism to exchange messages between applications such as Microsoft Mail, cc:Mail, Lotus Notes, etc.

wcCODE Package – a new high speed, 32-bit development language so powerful that all standard BBS functions are written in it.

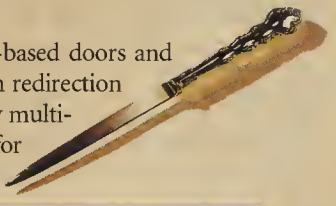
Source Code – for total customization of online activity, the wcCODE source for the BBS is also available for purchase (requires wcCODE).

SQL Database Client – provides full remote connectivity to distributed database processing using the SQL language.

Reports Client – reports BBS usage and statistics, and provides a means for manipulation, export and selection of database records using match criteria.

Billing Client – bill callers for any action performed on the BBS, includes report and invoice generation, pre-pay and post-pay models.

Annihilator fully supports all DOS-based doors and includes a program for DOS program redirection to any line. It can be connected to any multi-port serial card that includes drivers for Windows 95 or Windows NT.



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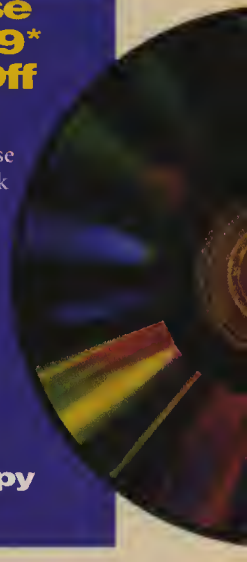
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Annihilator M32 (32 node)	$699	$174	$230	4th qtr.'95
8 Pack Node Increase	$199	$49	$65	4th qtr.'95
UUCP Client (dial-up)	$149	$37	$49	4th qtr.'95
Internet Clients (Telnet, FTP, WWW, UUCP, IRC)	$799	$199	$265	4th qtr.'95
MAPI Client	$799	$199	$265	Early '96
SQL Database Client	$799	$199	$265	Early '96
Reports Client	$149	$37	$49	Early '96
Billing Client	$149	$37	$49	Early '96
CODE Development Language & IDE	$149	$37	$49	4th qtr.'95
BBS Source Code	$799	$199	$265	4th qtr.'95

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Although the BBS on the CD will be operational, it is not intended to be used as a commercial BBS because it will not have completed testing nor will it include full printed documentation. Each CD contains Annihilator M16 plus all modules available in 1995. Some modules, including the Graphical Remote Client are not yet completed, but will be made available electronically to Preview purchasers as they are completed. This Preview CD requires either Windows 95 or Windows NT v3.51 for operation. *© 1995 Mustang Software, Inc. All names are trademarks of their respective companies.*

the 80's due to the misuse of the church as a tax dodge by thousands of our members.
Thirdly: YES, The Universal Life Church will ordain anyone that asks without question of faith, for life, without a fee. The church has two tenets: the absolute right of freedom of religion and to do that which is right. Anything else, within the law, is allowed. As an ordained minister of the church, you too may ordain new ministers. The Universal Life Church will not stand between you and your God and recognizes that each person must choose his own path. Each person in the ULC is free to follow any path as long as it does not infringe on the rights of others.

Today I would like to invite you to visit the church's HOME PAGE and view for yourself our latest outreach. We realize that when we cast our net far and wide on the NET we will draw many different people into the church. Over the years the ULC has drawn interesting personalities into its ministryfrom U.S. Presidents, U.S. Supreme Court Justice Douglas, and many celebrities and, sadly, even Jim Jones in 1971 when he pastored the small church in Ukiaha, California.

Our credentials are just pieces of paper, though they are legal and fully authorize individuals to perform all sacerdotal duties as are accepted by THEIR BELIEFS. We hope to empower people and we do.

Please visit our site and hopefully you will grant us a favorable mention in your publication. The site address is **http://ulc.org/ulc/**

Sincerely,
Brother Daniel
ulc@Euphoria.org
Modesto California

Brother Daniel:

But are we ready for you?

My natural libertarian tendencies normally lead me to a rather live-and-let-live posture. But the unnaturally cheery tone of your letter led me to a deeper series of thoughts. Always alert to those so I might avoid them, I'll cast them into this reply in the hopes that they go away.

Sure, you're a church. So is the Church of Scientology. So is the Church of Bob. In fact, the Reverend Bob Dobbs, church of the subgenius also has a web page at ***http://sunsite.unc.edu/subgenius****. In fact, we found over FORTY web sites devoted to Reverend Bob - which was a joke twenty years ago. The Church of Bob and the quest for some "slack."*

But my reaction is that this is not simply innocent freedom of religion with a smirk. It belies a cynicism and intellectual bankruptcy that is both obnoxious and ultimately dangerous. We have gone down a path in the last few decades that hopelessly and thoroughly confuses every issue for the great mass of our populace. It is NOT based on freedom of belief or of expression - quite the opposite. It is a cynical attack on it by those who do not believe in these principles.

The result has been that every point of view, no matter how preposterous, becomes arguably valid on the simple basis that it is held. Actually, in some cases, NO SINGLE PERSON believes in it, but that it can be proposed renders it ostensibly valid in this newthink/newspeak of freedom. We do have churches. I'm not myself particularly comfortable with organized denominations and religious rituals, but I do view myself as quite religious and understand the raison d'etre for Churches per se. They hold an important role in many people's lives and because of some harmful conflicts between churches and governments we wisely separated the Church function from the functions of state, and granted Churches special privileges as legal entities. Cynical people have then declared themselves "Churches" to the harm of all. And currently, we have one that has now again cynically discovered a legitimate feature of our copyright law system that they can use to ransack the homes of innocent individuals and seize their computer equipment with the ready participation of our ever more confused government - solely as a club to beat up on Church dissidents who are trying to warn the rest of society about the less attractive elements of what is really a fundraising scam that has nothing to do with religion at all.

Similarly, we have had groups in this country that were "victimized," minorities and others who suffered what any reasonable person would consider grievous and intentional harm at the hands of others - even within our government. In a well intentioned effort to address these grievances, some of these victims have been made at least partially whole. And so we now have hundreds of different victim groups, each clamoring that their victimization is more gruesome than anyone else's. At a glance, we can see that these claims are specious, but the track has been laid. If you can postulate it, it must be valid.

This has led to the wholesale intellectual bankruptcy of debate in this country. Discussions are held cynically manipulating the fashion tool of the moment. Most recently, you can gain credibility for any cause, no matter how distorted or ridiculous, by claiming it is for "the children." And the reports of horrors visited on our children grow daily. I don't think the horrors have grown - just the reports.

The worst part is that it directly abuses the stupid among us. I was at the mall today with my three-year-old son. He is unnaturally precocious. We walked across the mall thoroughfare and I allowed him to wander perhaps ten feet away though keeping him in site. We meandered over to a display of knives and cutlery at a mall store and were standing less than a foot apart, looking at the hardware through the window. A woman rushed up pushing a baby carriage with a young boy of about 14 strapped securely into it and started questioning my son. She asked him where his mother was. He told her she was at home. And she took him by the hand and very firmly and officiously instructed him to come with her, she would take him to the information desk and contact the authorities. He noted several times that he didn't want to go anywhere and that he was fine thank you but she was so insistent that I finally had to intercede and ask her just what she intended to do with him. She very self-righteously informed me that he was a lost child and SHE was taking charge and that I should stay out of it - what was MY interest in the child anyway?

What was incredible was that when I did finally get across to her that I was the boy's father, she wasn't the least apologetic. First, I'm not sure she believed me. But secondly, she assured me that terrible things happened to young boys in malls and she was simply trying to protect him. I did start to inquire what terrible things she actually had first-hand knowledge of, but when I looked into her eyes I saw the distinctive pattern of hair growing out the back of her head and decided I was facing a losing battle here. She mumbled something about television - her primary information source I suppose. I could hardly forfeit my son to her, but if I could escape with him - no further conversation would enlighten either of us.

Our legal system has bought into this whole hog. Whatever the situation at the scene of the crime, we can argue it near to death with no guidelines for right or wrong or moral or immoral, because all of those "walls" have been clubbed into non-existence. This has rendered our enforcement mechanisms powerless to deal with right and wrong, and they have taken instead the role of defender of 1. Themselves and 2. The state. They are roving gangs of outlaws with a slightly better dress code.

And I fear we are becoming a nation of morons. The rules of debate and discussion have become hopelessly muddied. And they have been muddied by cynical people who have intentionally advantaged themselves of what is truly best in us and our land - our reverence for freedom of speech, of religion, and of individual liberties. You, and your Church, and your web site, seek, in the final analysis, to enslave us all. Most alarming is that a sufficient percentage of our population is so woefully undiscerning, that it seems you win.

So rather than my hearty approval of your right to any religion you like, and your engaging use of modern technology as an organizing strategy, may I rather say this:

You're a moronic sack of shit with a modem. And when we extend this network to reach everyone on the planet, you'll still be a moronic sack of shit with a modem.

Jack Rickard

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BBS 101

I just recently got it into my head that it would be a great idea to set up a BBS. So I ran down to CompUSA and started browsing around and asking questions. The problem is that I couldn't find much literature about BBS's other than a quick mention in an Internet guidebook. That's when I stumbled across your magazine. I thank you for helping me get some desperately needed information surrounding the BBS. However, I find myself with a number of additional questions which I can't seem to find an answer to.

For example; can a BBS offer commercial software use on a BBS if it pays for additional licenses? or can it only offer shareware. What is the standard ratio of users to phone lines? and What are the overall

hardware/software requirements for 1 vs. 2 vs. 8 vs. 16 etc. users? These and other questions linger in my mind. Could you please point me in the right direction as to where I can answer these questions. Thanks.

Incidentally, I look forward to making Boardwatch my first monthly computer magazine.

DBDCPA@aol.com

DBDCPA;

No, BBSs cannot generally offer commercial software for download. Most of the software you see online is shareware or freeware with a few demos of commercial programs occasionally appearing. There are no "standard" ratios of callers per lines as it is variably dependent on how much time they are online. A general BBS with some discussion areas and file areas can usually handle about 35 calls per line per day.

There are several different strategies for doing multiline dial-up bulletin boards. Typically, you can have a local area network with multiple machines with each machine servicing a single telephone line. Or you can have a single machine with multi-port serial cards and multi-line software that handles all the lines from a single machine. And there are various hybrids of these two techniques. On today's Pentium hardware, we have seen over 100 callers on a single PC.

I would still recommend Alan Bryant's ***Creating Successful Bulletin Boards****, published by Addison Wesley. I think it will clear up many of your basic questions.*

Good luck with your system.

Jack Rickard

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THE NON-REPORTING OF AOL

Jack...

I wrote you a while back about the lack of AOL reporting, and you re-instituted it, and now, its gone, I think you say for good...

I don't see how you can ignore this company...or service...I'm now using MegaWeb, GNN, AOL's beta Web surf machine, and have had it for almost 6 months now...FREE. They are making great strides and are a good service... Compuserve, Prodigy, and the others are all competing, and I quite frankly like to hear about them all, including AOL...

Whatever...

You is the Publisher, you is the boss, and I'll still read and subscribe to Boardwatch...But, I still think AOL should be covered...Course I do have MSN too...

Gotta keep the bases covered...

Later
John Delaney
Reywal@megaweb.com

John:

We're looking very closely at whether to cover the major online services at all. There are at this point hundreds of thousands of online services we don't cover each month. There are probably 2500 Internet Service Providers we're not covering as well. It has been fun to watch the big guys go through the Internet transition, but they are fading from relevancy at this point in some key ways. I look at our surviving columns, largely surviving because of the excellent writers we have doing them, and have to wonder what we're doing with them in the book. It's a good read, but we can probably put the talent to work on something more interesting.

Jack Rickard

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MACINTOSH BBSING

Jack-

I was reading your magazine and saw the section on macintosh News. I read it but it didn't really answer my questions(despite being well-written and informative). I tried to get info from the suppliers themselves but couldn't find a number (or address). So I thought I'd ask you. I want to try starting up a BBS using a macintosh. The majority of stuff I've seen has been oriented towards IBM's and compatibles. I was wondering if you could help me by recommending any books especially for Mac BBSing and also any BBS programs for the macintosh. This will be my first BBS so, i'd kinda like to keep it simple. I'd heard about Second Sight for the mac but didn't know how good it was. I realize you have probably been asked this question a lot so if you could even reference a previous issue of boardwatch which talks about this I'd appreciate it. Any input you can give me would be appreciated.

Thanks;

Tom Huber
thuber@sol.rutgers.edu

Tom:

There are several companies specializing in BBS software for the Macintosh:

1. *Resnova Software - Novalink Server -* ***(714)379-9000***
2. *Softarc, Inc.- FirstClass -* ***(416)299-4723***
3. *Spyder Island Software - Telefinder -* ***(714)669-9260***

I would encourage you to not only contact each company, but also call a few bulletin boards using each type of software and talk to the system operators. I know of no book on the subject.

Jack Rickard

DVORAK SUCKS

In Boardwatch August 95 I read with disgust the article by Mr Dvorak"Prodigy & Win 95-Two Losers. In my opinion the only losers here are the people who having tried neither product take Mr Dvorak's word as truth and don't try them.

All Prodigy did was try to be responsible, the fact that Mr Dvorak and others think that trash and smut should be allowed on line is degrading. Would you want to find these things at the public Library?

In his comments on Win 95 he acts as if certain programs are going to make your computer go unrecoverably crazy and in his words" We'll be awash in a sea of anger", Please, and then the ultimate comparison to OS/2 and NT, of course 95 doesn't have the crash protection of either, but that was the trade off to make it compatible with the present 16 bit programs. What he neglects to say is that it is a great deal better than 3.1.

Such self serving articles, that present only half facts, have no place in publications like yours. Maybe Mr Dvorak hasn't kept up with the times and is afraid of what he doesn't understand . All the talk of the amount of money that Microsoft has spent is just another way of misleading people. What does Mr Dvorak think Microsoft is in business for? What is Mr. Dvorak in business for? Now I wonder.

Bill Page
Ntents@msn.com

Bill:

I checked with John. He said no, he doesn't suck.

I myself have gone completely ga-ga over Windows95. I think it is the most dramatic innovation since the introduction of the IBM PC in August of 1981. Slicker than store-sliced bread. John likes OS/2. Cool.

And yes, we do have a place for such articles in Boardwatch. As I recall, I went to some lengths to get him in the magazine in the first place. And if you don't like his views on Windows95 - hey, how about that guacamole recipe?

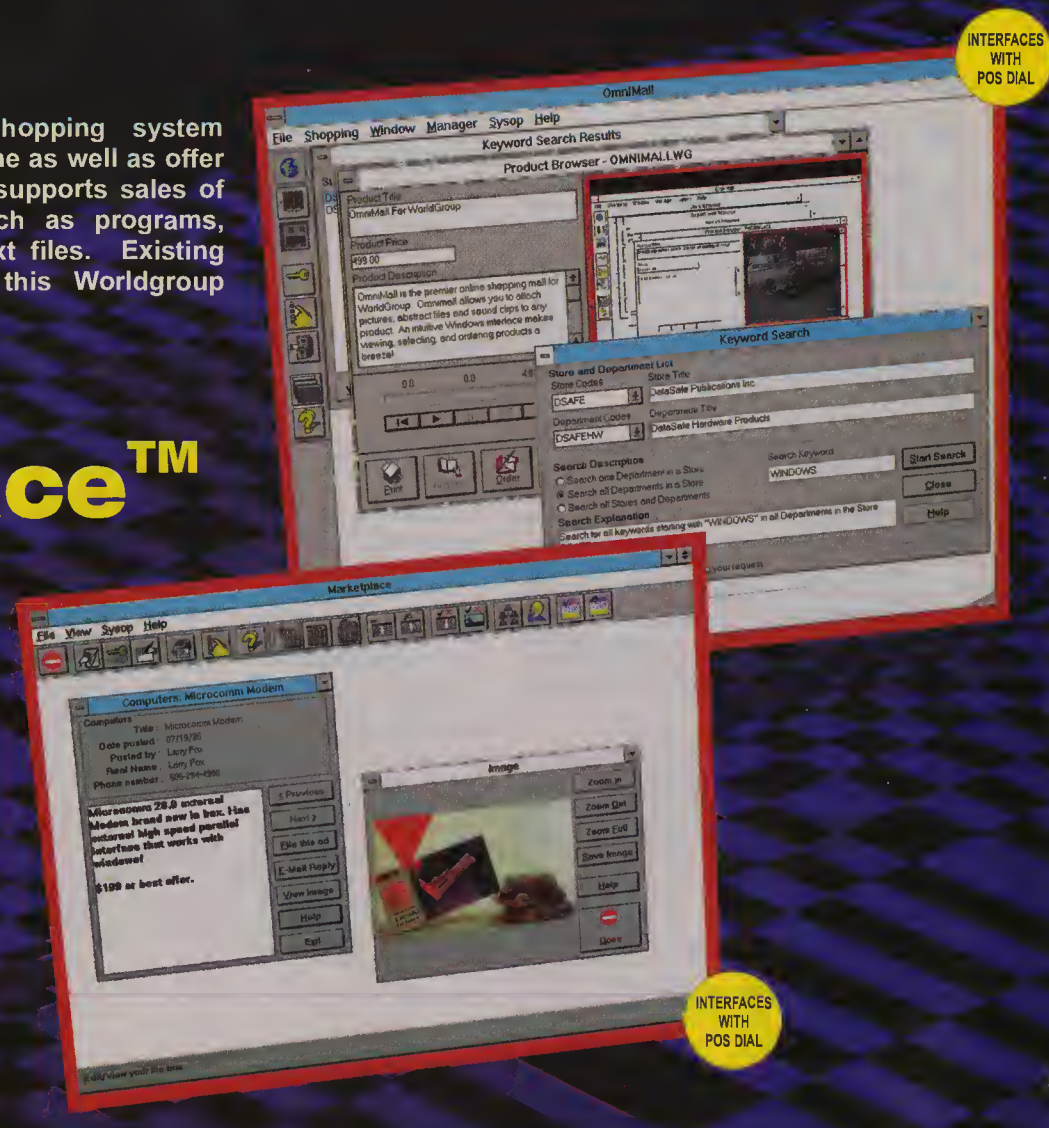
I personally rather resent it when I pick up a magazine and detect the distinct odor of a party line informing me that Linux is out and OS/2 is in or whatever, running throughout the book. Or that NT will never make it. I just don't trust it. But we all have opinions. I just really don't like OS/2. John really does. I think UNIX is being hawked as a solution to people who can never run it in a million years. Most of our ISP's think I'm a novice for saying so. In Boardwatch, we don't have a party line. John writes what he writes. I write what I write. If you'll note, we have others as well. It makes for a messy view of a messy industry. But over time, you may detect a few writers who more often than not hit the nail - maybe not on the head, but at least a glancing blow. I would like to think you'll find more of them in Boardwatch than anywhere else.

Jack Rickard

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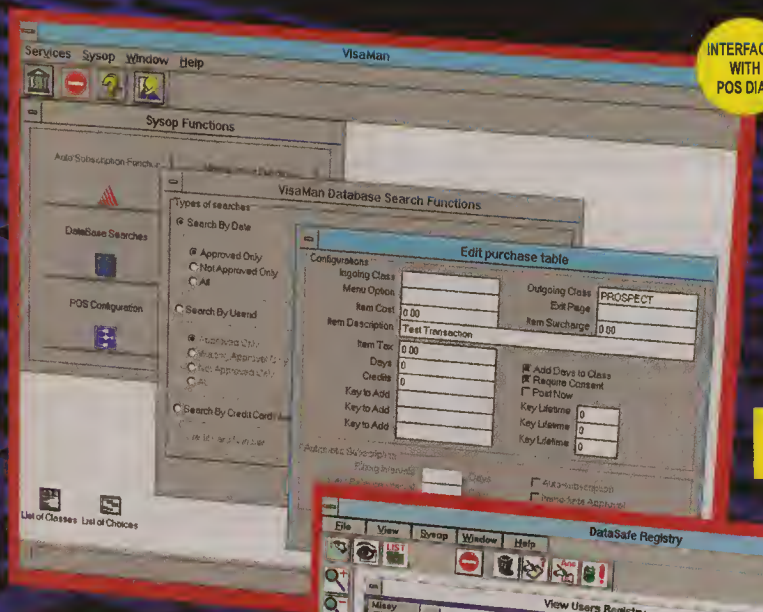
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STARTING A BBS

Hi Jack,

I've been a reader of BW for the last 4 months. My interest in BBSing and the online world has been steadily increasing and shows no signs of abating.
While I consider your publication an outstanding resource for me and will continue to read it faithfully each month, I am considering starting a BBS and am looking for suggestions on resources to do this. For example, I have questions ranging from what are the legal issues I need to deal with, what are the risks and how can I avoid some major blunders. Also, I have questions about finances, marketing, required capital etc.

While I feel "Boardwatch" addresses the issues of already existing BBSs and issues for users, this type of information cannot be found. Question then is: Does BW have a reading list, or can you help point me in the right direction?

I'm aware of some of the risks in operating a BBS or online service, but I'm determined this venture be successful and I want to become aware of what I don't know.

Your assistance would be GREATLY appreciated.

Thanks,

Weldon Morgan
weldon.morgan@tbbs.bcs.org
Boston, MA

Weldon:

I understand the problem. I could recommend a couple of books to you from what you've indicated.

Alan Bryant's ***Creating Successful Bulletin Boards*** *is published by Addison Wesley and has been very well received.*

Our own Lance Rose has a book out, published by Osborne McGraw-Hill titled ***NETLAW, Your Rights in the Online World*** *that I think you would find very enlightening on the legal aspects of operating an online service. ISBN 0-07-882077-4. Available from Osborne/McGraw-Hill, 2600 Tenth Street, Berkeley, CA 94710,* ***800-822-8158*** *or* ***(510)549-6600****.*

Jack Rickard

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EXPANDING WILDCAT

Dear Jack,

Thanks for a great magazine! You always seem to get the info out there before anyone else and make it available to us in an easily digestable form.

My fourteen-year-old son has set up his own BBS using Wildcat software here on the Big Island of Hawaii ("Future Illusions", [808]885-7899). He wants to expand with more lines, but I'm having trouble finding hands-on type info on how this is done and what kind of equipment is needed. He's presently using our Micron P90, and I suspect that a less powerful machine would do the job just as well at a much lower cost. Could you could direct us to some info sources. I tried searching through the Boardwatch web site, but I didn't really know how to word the search to get what I wanted. Thanks for your help.

Sincerely,

Brendan@aloha.net
Brendan:

To run multiple lines using Wildcat you may need some horsepower. But it is true you could probably run on less capable hardware. I would refer you to Mustang Software. They have a package that uses a Digiboard PC8e multiport serial card to run eight lines from a single PC.

Beyond that, Wildcat is rather well linked with Novell Local Area Networks. You set up a Novell file server and a series of workstations running Wildcat to serve up to 255 lines I believe. You might contact Mustang Software Incorporated for more information. They have a web page at ***http://www.mustang.com*** *and a dialup BBS at* ***(805)873-2400****.*

Jack Rickard

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BBSCON

Jack,

It was great to meet you for the first time, though I did attend the conference in Atlanta last year, only I got the dates mixed up and had to leave in the middle.

Since this conference was even better than last year, I have a suggestion that may enhance it even more for the participants next year.

Some of the sessions contained such terrific information with real take-home value that I, and those neighbors I was able to observe, were frantically taking notes, barely able to keep up with the speaker.

It would there be much to everyone's advantage if all the speakers would prepare their presentation in some slide show fashion (Powerpoint?) and distribute the handouts of the presentation before or after the show so we don't feel like failed secretaries because we missed some crucial point.

For example, one of Phil Becker's presentations was so educational that I took 6 pages of notes, and I'm not a note taker. But the stuff was so informative that I couldn't help it.

He did present it in slide show format, but no handouts!

Another great lesson came from Brett Glass (did I misspell his name?).

Anyway, he was fiddling with overhead transparencies writing on them with a handwriting more suitable for illegible prescriptions. His stuff, though basic was also great, but unnecessarily sloppy...

Since everything else at the conference was first class, especially the information, why not also the delivery?

Anyway, voila my two cents. Again, great conference, looking forward to San Francisco!

Be well, regards,

Renee Palmer
renpal@panix.com

Renee:

Very pleased you found ONE BBSCON of value. Your point is well presented, and I agree. But logistically, it is a bit difficult given the nature of the beast.

Most tradeshow/conventions hire a few industry pundits to come in and present, from the august platform of their position in the world, some information to the hapless minions who attend. I've listened to some fantastic presentations from some very elevated personalities over the years and have come to the conclusion that while entertaining, they almost invariably had most of it wrong.

ONE BBSCON is organized along a very different concept. We have a kind of stone soup show-and-tell event where we get as many people from as many DIFFERENT ponds of online activity as we can. They get up and show and tell what's hot in THEIR pond.

The result this year was over 220 speakers in 187 presentations. It's a little wild, but if you pick carefully, you can find out more about what people are actually doing in the industry than anywhere else. The down side is that they do tend to be the "doers" as opposed to those making a buck on the public speaking circuit. The presentations are generally less polished, and lack some of the niceties you may be accustomed to. And getting 200 of them to do anything is a bit like herding cats.

We try to make up for this a bit by audio-taping all the sessions and making the tapes available almost immediately and at a reasonable price. But I understand that doesn't help much with the overheads. We'll take a close look to see what we can do to improve the situation next August in San Francisco.

Jack Rickard

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BOARDWATCH PIONEERS WEB-BASED TELEMARKETING

Jack,

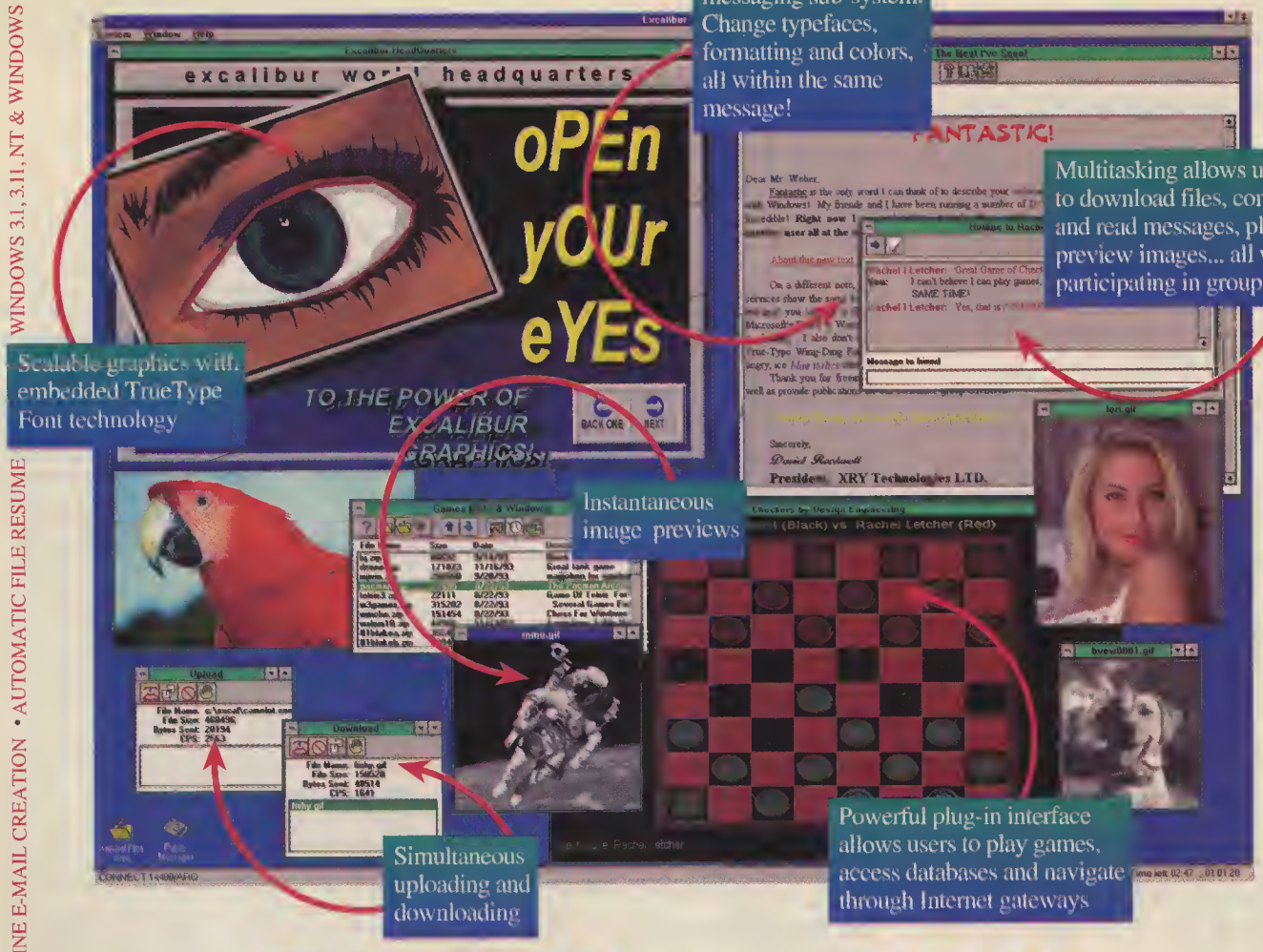
I'm sure I was not the first name your hired-help Donny pulled off hisblist of names, qualified possibly by lack of response after two free issues sent from the Boardwatch Online Web registration form I filled-out. Maybe other dialing criteria had to do with the number of times I visited the site or some other statistic you garned from your Web stats.

I have "registered" (filled out the obligatory form) to a number of Web pages, many of which are very popular and run by mega-media giants, etc. just to suck-up their content online for free. You're the first to telemarket it me. Not that it couldn't be expected, but I hope that you report this phenomina in your great mag, the physical version of which I probably will subscribe to one day.

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Did you hear about the next Ninetindo machine having a Web browser as part of it?

The Web's great stuff... can't stay off of it, glad I work for an ISP (thanks for the free plug in September) and have a redudant T3 backbone to on-ramp from while I work.
Oh well, found the Web telemarketing amusing yet scary. Think about it: web stats can tell a lot about person's habits only with no surveying involved.. just one simple web-form registration, etc. I'm awaiting a report from a men's magazine Web site: % of users connecting from Northwest regional ISP's and Universities who view more than 7 megabytes of pornography a day. Maybe they should be hit up for a subscription from some other magazine.

Oh, well.. like everyone else I'm waiting to make my $ million of the killer content site or groupware Web app that I devise.

Your continued fan of magazine and your person,

You have my name and number, e-mail address and hit rate...

-David Jones
dljones@cerf.net

David:

Quite true. We have been experimenting with different ways of marketing Boardwatch. One of them is that we put the full text of the magazine on the Web, and ask for a mailing address and telephone number. And we can detect a "hit rate" if we care to I suppose. Donny has been dialing a list of people who do read Boardwatch on the web, and offering them a deal on a sub to the printed magazine.

It's a little early to tell at this point whether any of this makes sense. My initial take is that we are doing quite a few subscriptions this way, and that the impression left even with those who do not choose to subscribe has been largely positive. Most of the reaction to junk mail and junk calls is a reflection of how poorly they are targeted. If I get a call from Sharper Image or L.L. Bean, I'm ok with that. If it's someone selling pantyhose or some kind of Time/Life thing, I'm incensed largely because I don't have any interest in that stuff. I think the web can allow companies to solicit only those who truly have an interest, and may thereby improve the situation for many companies.

There is a raging concern I detected first among the Computers Freedom and Privacy crowd about the amount of knowledge companies held on individuals. Some of the theories, largely held by people who had never marketed anything, were actually funny. It is true that computers can collect an immense amount of information. So immense that no one can actually deal with any specific person in the database in at all human terms. It's not a blur after awhile. It's a blur immediately. I think we sort out the database by the number of hits, and so if you contact the web a lot, you move to the top of the database. Beyond that, Donny hasn't a clue about anything other than your name, your telephone number, and that you made the list indicating some strong interest in Boardwatch. And he knows a lot more about it than any of the rest of us. I suppose the same techniques could be turned to some nefarious end by someone with nothing better to do. But those in the marketing game are a little too busy.

Finally, the whole process is designed to knudge you off the dime if you are already so inclined. We don't use outside "boilerrooms," high pressure sales techniques, etc. Donny is right in the other room where we can keep an eye on him and under rather strict instructions not to screw around with our people. If you want to read Boardwatch for the next ten years off the web without subscribing to the print version, you are most welcome to do so. And if a print subscription doesn't fit your plans, we take no offense at a no. Most of our success stems from having a very focused readership of software developers, Internet Service Providers, BBS operators, and other serious "players" in the online community. The paper is too dear to mail to the casually interested.

Jack Rickard

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LETTER TO ERIC GOFORTH SEPT.95

Hi Jack,

I would like to start off by saying that I like to read your magazine. I just read your letter to Eric Goforthin the September issue about your magazine getting away from The True Sysops and going too much in the direction of Internet. I agree with him. There are thousands of magazines out there that are Internet Oriented. Why do we need another one? We don't. What we need is a magazine to support BBS's. I know that Internet is the thing right now and I even have it on my BBS but, we need a good BBS magazine. I thought that your letter back to Eric was outrageous and totally uncalled for. He was simply making a point and there was no reason to put him down like that.

Mike Hildebrandt
sysop@alternativ.com
The Alternative BBS

Mike:

Noted. The problem is, I'm pretty familiar with the "true sysops" and they've all gone to play with the Internet. A lot of the johnny-come-lately's who bought into running a BBS after all the hard work was done and they could do it on the cheap are understandably resentful that the frontier has moved on and they are once again "townies." But no matter how much they want the world to stand still for them, or how much you think they need a magazine, I can't provide it. Boardwatch is about the innovations in online communications and always was. I think within just a few months it will become apparent that bulletin boards have taken over the Internet, not the other way around. There will be a residual segment of the BBS community still dialing and still giving long distance carriers their ducats, but it looks like a ham-radio remnant to me. We think the majority of the 2500 Internet Service Providers now in operation were running a BBS a year ago. And we think the World Wide Web is similarly going to wind up being mostly BBS operators with a new toy. So I don't think the world has changed so much as it has progressed to this year's software and hardware tools. The players remain the same.

Jack Rickard

Jack,

Bravo for having the conviction not to hide behind the veil of political correctness. I chuckled when I read your response to Eric J. Goforth (September 1995), who was expressing his disappointment that your magazine was shifting from the BBS toward the internet. It was as blunt as it was on point. If your directness cost you a subscriber, I believe you will replace him with two more. I may be typical of your new subscribers. I am a CPA with no formal computer training but have learned everything I know aboutcomputers by reading as many computer magazines as I can. Recently I started a community oriented website for the county I live in; Mecklenburg Online! - **http://www.he.net/~brumley**. I wanted to start a BBS years ago for the same type of site but lacked the time and money (lack of time and money alsokeeps me from playing golf). After reading your June article about starting your own website, I gained the confidence I needed and within a week I had my website up and running. I still can't believe how easy and inexpensive it was. I recently helped our local police department, Huntersville Police Department, set up their own website, **http://www.he.net/~pg/toh/hpd**. The police chief, a computer enthusiast, is now setting up a website for the local town hall. I am now convinced the web was what was needed to bring the masses to the online community. I consider myself a SYSOP as much as I would if I had a BBS. The website is just a different tool for accomplishing the same goals that BBS's were used for. I love your magazine, especially your commentary, and just subscribed using your website. I usually read the printed magazine and use the online magazine to check out the links I read about. I was surprised to receive a postcard confirming my subscription and not an email, until I realized that this was an inexpensive way to verify mydelivery address and avoid delays receiving my first subscription. Great idea!

Scott Brumley
SBrumley@ix.netcom.com

Scott:

My point exactly. You look like a BBS sysop circa 1995 to me. You sound like one too. As those who have followed Boardwatch over the years will readily attest, we are not off our beat at all. We can lead, follow, or get to hell out of the way. I want to lead. We are. Again. Still.

Jack Rickard

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2. Copyediting. The number of silly errors continues to mount. Your writers have particular trouble with apostrophes. [it's and its being the worst problem.] One full time copyeditor ought to solve this problem, and again it will give you an awful lot of credibility when you critique someone else's attention to detail.

But these are just cavils. Keep up the great work.

Seth Godin
President
Yoyodyne Entertainment
seth@yoyo.com

Seth:

All valid points. But while we are copy editing and designing, who's going to figure out how Windows95 works?

Very pleased you're with us in spite of our presentation.

Jack Rickard

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THE LOOMING TELCOS

Hello Jack,

I'd like to congratulate you on the success of ONE BBSCON in Tampa. It was my first con, and even though the meat of the convention was 3 days, 9 hours per day, I still had trouble fitting everything in. My only suggestion would be to add a familiarity level to the seminars. That is, mark each as beginner, intermediate, advanced or some such. While I found all of the seminars I attended worthwhile, some were at a level where I would not have attended had I known beforehand. Just a suggestion.

I'd like to make a comment on the Jack and Phil show. Great presentation. I found it strange that you and Phil find it strange that we, as entrepreneurs, are scared of the Telcos. I think perhaps you have forgotten what it's like to pour much of your savings (if not all) into something you love, but are not too sure about it's success. When another company with a gigadollars more than you have says they're taking over yourbusiness, you get scared. I run Nomad BBS in Kenosha, WI (**414.656.9815**), and I am somewhat scared by the looming telcos and the fluidity of the technology on the Web. I think it's natural for younger companies.

This all leads me to my real question. You and Phil mentioned that the Telcos will not take over this area for two reasons. The first is that the small business-person is closer to the customer, and therefore can supply greater satisfaction and respond faster to their needs. The second was that it would not be possible for them to do it for the next 5-7 years. Why is that? Is it because of the gargantuan effort it will obviously take? Or is there some reason (bandwidth, hardware limitations, etc.) that they can't do it when they say they will. I have some ideas (I have experienced the inexperience of my Telco many times already, and we're a fairly new business), but I'd like to hear your views.
Any information would be appreciated. BTW, your article a few months back on the history of the Internet and the directions it may take in the future was excellent! It changed my mind about going to the Convention. I had given it up on it as too expensive, but after reading that, I thought it an investment very worth my while. I packed up a tent and drove to Tampa. It was great! Thanks again,

Brad Beaulieu
Sysop, Nomad BBS
414.654.2773
brad.beaulieu@nomad-bbs.com

Brad:

Now let me get this straight. You think perhaps I have "forgotten what it's like to pour much of my savings (if not all) into something I love, but are not too sure about its success. When another company with a gigadollars more than I have says they're taking over my business?" Like CMP? Or IDG? Or Meckler Media? Or Ziff?

Ok, maybe I've forgotten.

Anyway, a valid question.

The very commonly accepted wisdom today is that Internet Services will be taken over by corporate backbone operators ala Sprint, MCI, AT&T, IBM, and perhaps a couple of large players such as Microsoft Network and CompuServe.

The reference to "looming telcos" refers to the fact that since the early 1980's the continous fear of BBS operators was that the telcos were going to come take it away. Each year they look about ready to pounce, and each year they recede into the horizon again. It ALWAYS looks to BBS operators that they are just about there. It ALWAYS looks to me like 5-7 years. I don't know that they will EVER get there.

The problem is that BBS operators occupy a unique "space" in the spectrum that simply can't be occupied by anyone else. If there weren't BBS operators currently, we would have to invent them. And it has to do with customer service and the way knowledge of online networking must be passed on.

BBS operators occupy the heirarchical top of a guru pyramid. You may view your callers as novices. But in their offices and homes they are the guys who know how to get on the Internet and get on a BBS and get software and so forth. They look to BBS operators to teach them how to do all this. Their office mates in turn look to them.

At the current state of the world as it is, making a connection to an Internet service is NOT plug and play. Sprint and MCI announced over a year ago that they were going to sell SLIP/PPP accounts cheap. Where are they? CompuServe and Prodigy and AOL do offer SLIP/PPP accounts. So how can 2500 Internet Service Providers still be in existence.

The answer is pretty simple. Most people who look to go onto the Internet via a dialup need a bit of information. How to set up Winsock, how to get e-mail working with a POP3 mailer, in fact, what is the difference between PPP and SLIP and why would I care. Many of the 18 million BBS callers don't want to use CompuServe, they want the local BBS to show them how. And BBS operators, in a combination of online text, software files, and just answering the voice phone and coaching them through it, can in fact bring a few hundred people into the fold. With a few tens of thousands of bulletin boards, each bringing a manageable few hundred people through the learning curve, a lot of new Internet users make the trip.

Telephone company customer service deals with very little well. Your voice phone either works, or it doesn't work. If it doesn't, you call them, and they promise to fix it. It gets fixed later. A rather binary function that requires little knowledge on the part of the operator taking the trouble call. Anything more complex than this leads you to a terrifying trip through phone land with no good effect. Cable companies? They actually analyze network problems by MAPPING trouble calls up on a map on their wall. After a sufficient number of calls, they can pinpoint where the problem likely is. They don't do as well as telephone companies. Even the Prodigy's and CompuServe's of the world just can't hold the customers hand through a Winsock installation. BBS operators can. And they do. They always did.

I think they will be doing the ISP gig for the next five years unmolested. The reason is that the technology is not yet mature enough for a telephone company to deploy and support it. By the time it is, BBS operators will be on to something else. It has ever been so. It will ever be so.

The two elements referenced were customer service and the immature nature of the technology. They are admittedly interrelated.

Jack Rickard

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EMPHASIS ON INTERNET IN BOARDWATCH

Dear Jack,

You seem to have taken a hammering from some of your old subscribers in the latest Letters column over your magazine's shifting emphasis from private dialup boards to major services and Web sites. I thought I'd weigh in from the other side: I've been aware of Boardwatch for about two years, but only began to read/subscribe this year, when your annual promotional mailer indicated your new emphasis on Internet and Online Services such as my own service, AOL. This is news I can use!

I freely admit to still being essentially clueless about more than half of the topics in any given issue, but that's OK — I'm coming up to speed, slowly. BTW, when was your last review of introductory books about private telecommunications (e.g. BBSes, online services, Internet)? I

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obviously need some help here, and while your magazine (can one call a mostly-electronic publication a "rag" anymore?) has some of that, I could use a more concentrated dose than Boardwatch provides.

Phil Sevetson
PSevetson@aol.com

Phil:

I'm taking a hammering on something or other all the time. That's my yob man. I'm the editor. We used to do a lot of book reviews. Then we got buried by an Internet Book tsunami and we're experimenting with different ways to use it as insulation. Seriously, we're talking to a writer now about a regular book review column. Much needed.

Pleased to have you with us.

Jack Rickard

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THE BEST OF THE BEST

Dear Jack:

I have been reading your magazine for all of 1995 and I am hooked. As a result of all the information provided in your magazine, a group of us women took a chance and opened a web site selling blue green algae to help people get more of the nutriants out of the food that they consume. We followed all of the suggestions as set forth in various articles that were written and keep every single one as reference material. Come see our work in progress at **http://www.calypso.com/april**. We highly recommend your magazine to all people in our group as required reading.

best regards,

April

Visit our site at
http://www.calypso.com/april
E-mail: **april@calypso.com**

April:

The proof is in the pudding. Sounds like a bang-up special interest site. If we helped you get there, we did a good thing. Thanks for reading.

Jack Rickard

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THE BBS SIDE

Jack,

Okay I have sat in a corner and just watched long enough. I will admit that I have not been a SysOp as long as most of the people that write you, been doing 3 and 1/2 years, but I have been doing it long enough what Fossil stands for, just curious do you :). All this talk about Boardwatch leaving the BBS scene and going Internet is starting to get to me. That is the way the online world is going. Unfortunately if you try to stay with just a BBS you are going to miss the online boat. Look at Tom Jennings, he is now an ISP. Forget what issue you discussed him in about that. I personally see that as a sign of the times. I know that this SysOp is about to do the ISP thing as soon as I get the money to get the hardware and the connection.

I will still run a BBS. Why? Because I will admit that once it is in your blood it is hard to get rid of it. I see that transition as this: Instead of staying up all night trying to get those ANSI/RIP screens done up for your menu, we are staying up all night trying to get the HTML screens to look right. Am I sorry to see the BBS going away? Not really because it will always be with us in some fashion or another. As for these people that whine, well your gonna hate me for this suggestion but there is another magazine just for BBS's. It is called, gee where did they think up the title, BBS.

Okay thats all for my $0.25 worth. (Inflation has hit opinions also :)

Jeff Claggett
CS Major
Valdosta State University
jclagget@valdosta.peachnet.edu
http://www.valdosta.peachnet.edu/~jclagget

Jeff:

That's about my read on it too.

Jack Rickard

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INTERACTIVITY

Dear Jack,

Congratulations on Issue No. 100! I have been a regular reader for only a small fraction of those 100 issues, but as long as you continue to provide useful, up-to-date information about the on-line world, I will look forward to the next 100! Even though I sometimes disagree with you and some of your columnists' (sometimes pompously stated) views, your publication is still the only one of its kind on the market that contains more pages of editorial content than advertising. It's worth every penny.

I am especially amazed that you take the time to respond to so many of the letters. Truly an interactive publication!

Which brings me to the point of this letter. I've seen much recent debate about whether the Internet will mean the demise of small BBSs, etc. And there's much commotion about the World Wide Web, which I admit is seductive and fun. It's also a very good way for a lot of people to find and get information or entertainment relatively quickly and easily. But what puzzles me is: Why is it called "interactive"? I find it to be one of the most passive media on line yet. You can click a lot of icons and end up in on a completely different page halfway across the world in a matter of seconds. But it's all still basically *one-way* communication. Sure, I can click the Webmaster's e-mail link usually found at the bottom of the homepage, but so what? If the Webmaster happens to respond, it becomes a two-way interaction. If not, it's still just me clicking icons. And no one else hitting the page will ever know I had something to say about it!

By contrast, Usenet newsgroups with their boring text interfaces and little local text-based BBSs with public message boards have way more interactivity. If I have something to say, I post it, and if my message is compelling enough, one or two or five people respond, and those conversations branch off into 15 others. *That's* what I call "interactive, " and so far, I've not seen anything like this on the Web. And as long as that's true, I believe local BBSs will always have a niche.

Or am I missing something? Are there Web pages out there that offer this sort of interactivity? Or is it even possible (I don't know a thing about it technically, but perhaps there's an issue with security — users writingto the Web server?)? What are your thoughts on this?

Again, congratulations, and good luck on the next 100!

Tina Koyama
74641.1273@compuserve.com

Tina:

I agree. I just don't see it in quite the same static terms.

The World Wide Web as currently constructed is non-viable. The concept of creating pretty screens, having them blessed by your lawyers, and presenting them for online sale and consumption was disproven in the early 1980's to the tune of several hundred million dollars. I understand that Prodigy, who neared the brink and discovered interactive BBS communities, has a new management team now that is willing to try this online hari-kari one more time.

Some of the economic characteristics of the current web are non-evident due to the flow of new web surfers. Many discover the web, go nuts surfing for a few weeks, and move on once the novelty expires. But we have such an influx of new people on the net that this is not apparent.

By the time it is, I don't think it will be a problem. World Wide Web sites are simply crude at the moment. But a lot of people are working on expanding the utility of web site software, browser interfaces, and HTML itself to allow for functions like message areas, caller management, chat, and so forth. Before the problem becomes an apparent problem, it will likely be solved. And WWW sites will operate much like bulletin boards, actually exactly like bulletin boards, but with better connectivity, and a GUI interface. At that point, they will be interactive.

But I agree. What you see now is NOT interactive. It is online. And it has a certain novelty. If it is to live beyond the novelty/fad phase, it must become interactive. This is so apparent to me that I sometimes think it has already happened. It hasn't. But it will. We intend to keep you updated on the new tools that allow that transition.

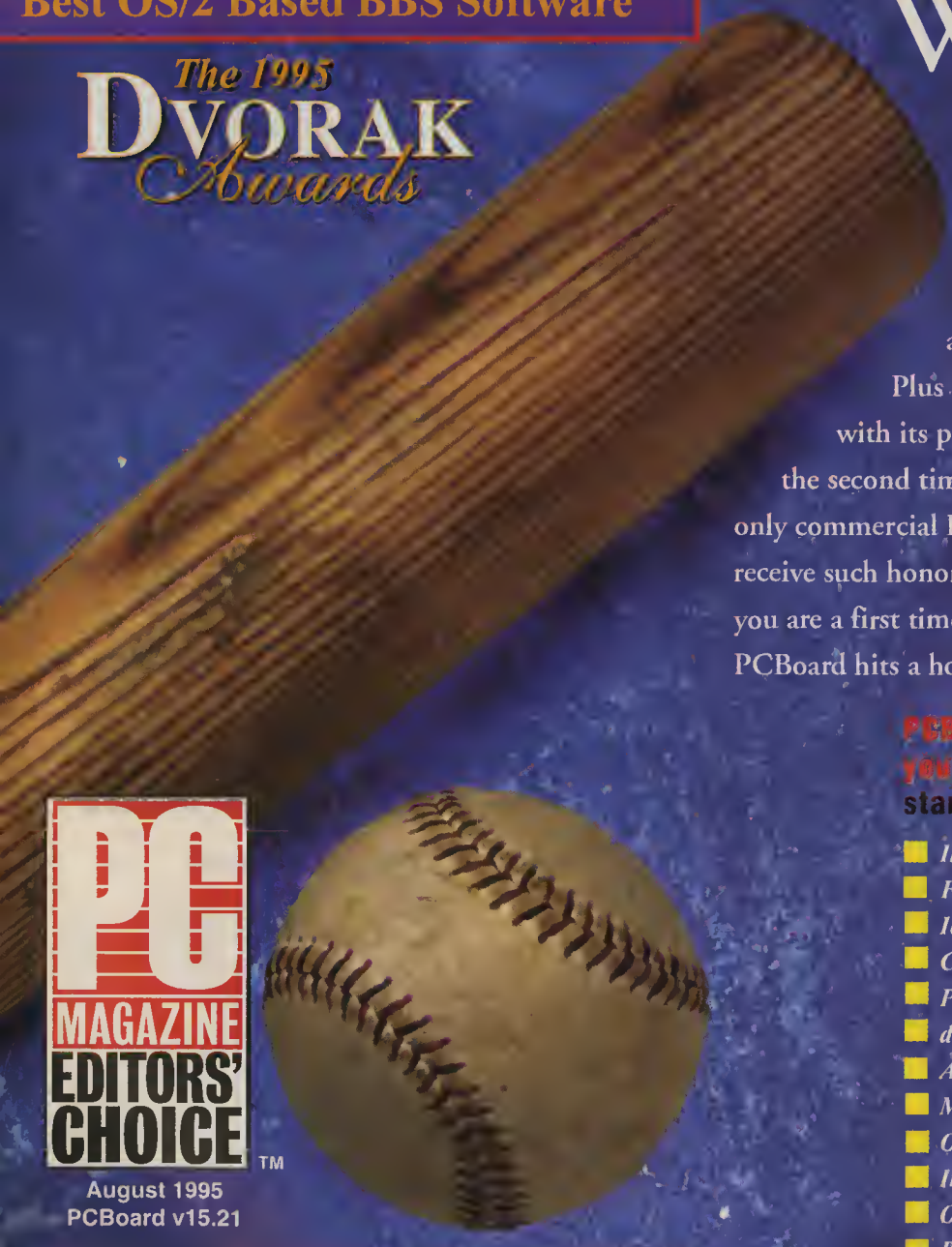
Jack Rickard

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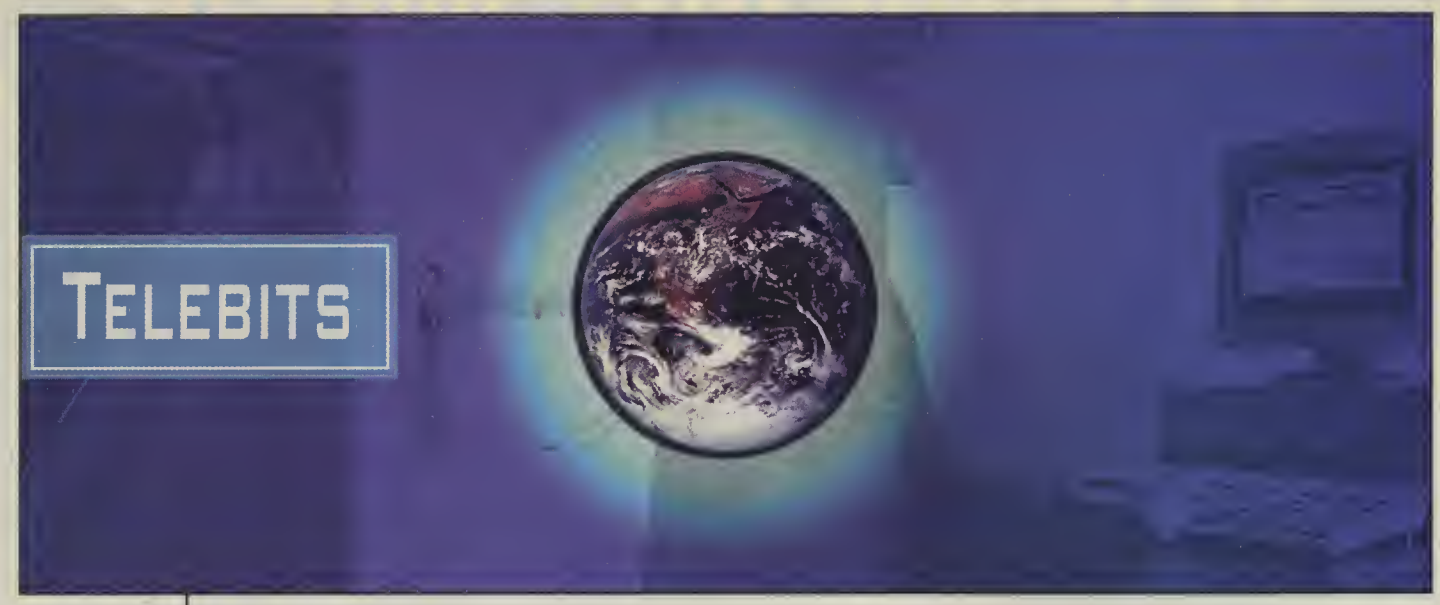
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DOMAIN NAMES NOW COST $50 PER YEAR

Network Solutions Inc., the company which registers Internet domain names, has started charging an annual registration fee for each domain name. Companies registering new domain names will pay **$100** for each of the first two years and **$50** per year thereafter. Domain names registered prior to September 14, 1995 will incur a $50 annual fee beginning on the next anniversary of their registration. The charges do not apply to individual e-mail addresses; a person with the address of **70007.411@compuserve.com**, for example, will not have to pay the fee, but CompuServe will pay $50 per year for the **compuserve.com** domain name. Hit **http://www.internic.com** (and be *very* patient) for details on the domain name registration process.

The registration fee may curb the flood of some 14,000 new applications for domain names that Network Solutions now receives each month. Many firms and individuals have been registering domain names for which they have no immediate use, in an effort to stake claims to desirable names. Proctor & Gamble, for example, registered over twenty product-related domain names – including **underarms.com** – in the month of September.

EOLAS ACQUIRES RIGHTS TO KEY WEB TECHNOLOGY

If there's a market, there's a corner on it just waiting to be grabbed. Eolas Technologies Inc. has completed a licensing agreement with the University of California for the exclusive rights to a pending patent covering the use of embedded program objects or "applets" within World Wide Web documents. Also covered is the use of any algorithm which implements dynamic bidirectional communication between Web browsers and external applications. Eolas CEO Dr. Michael Doyle invented the licensed technology in 1993. The first "weblet," as Eolas calls embedded programs, was an interactive 3D medical visualization application. Now Eolas is negotiating with major vendors over licensing agreements for its technology. The

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company has also released its own web browser, called WebRouser, for Sun OS 4.1.x , Silicon Graphics Iris 5.x and Linux operating systems. Windows and Mac versions are promised sometime in 1996. Contact: Eolas Technologies, Inc., 10 East Ontario St., Suite 5106, Chicago, IL 60611. Voice **(312)337-8740**; Fax **(312)337-8743**; **http://www.eolas.com**

NET TOOB: SOFTWARE VIDEO PLAYER

Duplexx Software – **(800) 321-7144** – offers a software-only multimedia viewer that decompresses MPEG-1 files on the fly and will also play AVI, MOV, FLC and FLI files with appropriate drivers installed. Net Toob can be installed as a helper app in web browsers. Net Toob provides real-time audio and video playback using substantially smaller files than equivalent AVI or MOV files. The viewer can be downloaded from **ftp://cove.com/pub/duplexx** but it only functions fully for two weeks.

SIMMEXPANDER: SALVAGE OLD SIMM CHIPS

Have you looked at your 30 pin one meg SIMMs lately? Are they turning to dust? Want to recycle them? The Minden Group's Simmexpander is the ticket. These standalone SIMM cards will allow you to place four 30 pin one meg SIMMs onto one, 72 pin SIMM. Voila! You have yourself one 4 meg, 72 pin SIMM! This way you can recycle those old one meg SIMMs instead of crying over buying brand new four meg SIMMs. Best of all, Simmexpanders retail for about **$45** so they won't break your budget. Contact the Miden Group Customer Service at **(408) 399-6645**.

MORE INTERNET PHONES

Quarterdeck Corp. plans to introduce its WebPhone voice-over-Internet product at retail stores this October. The **$50** full duplex software package will include Quarterdeck Mosaic, the company's web browser. "This is what the Internet was made for," says Quarterdeck CEO Gaston Bastiaens, "making it easier and less expensive to communicate and share information." Quarterdeck Corp.: **(310)352-9851** voice; **http://www/qdeck.com**

VIC Hi-Tech Corp. has introduced an Internet videoconferencing system targeting small business workgroups. The basic **$99** Global Phone software includes a shared whiteboard and supports multiple image file formats. The high-end **$1299** system includes software, a video digitizing board, a compact monitor-mounted camera and a v.34 voice-over-data modem. Contact: VIC Hi-Tech Corp., **(310)643-5193**

SOFTWARE.NET OPENS WIN '95 PRODUCT CENTER



CyberSource Corp. has opened a Windows 95 Product Center at **http://software.net/win95.htm** — home of Software.Net, the Internet-based software information and distribution center. The site includes dozens of products from 15 vendors — including a selection of downloadable demo and full-blown versions — news and bug reports on Windows 95. Software.Net is a great source of information as well as a convenient and reasonably priced software distributor. CyberSource Corp.: **(415)462-5524**

PAGER SOFTWARE FOR TBBS AND MAJOR BBS

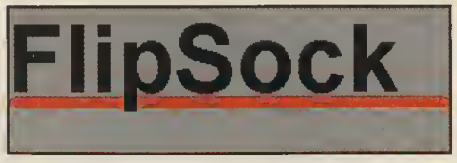
At first, we didn't get it: why would anyone want to be paged by a BBS? Apparently, quite a few people do; the ones who log on to their favorite boards two dozen times a day looking for Internet mail from business colleagues or a response to their last personal ad. Some people feel terrible when they miss a chat page, too. In any event, paging modules are becoming popular add-ons among BBS sysops. ***The Pager! for TBBS*** is available from The Beach Board BBS — **(941)694-0022** data — or **http://www.gwabbs.com** (GW Associates). This **$89.95** package will page your alpha or display pager when you have Internet or local mail. If you don't have a pager, the software can call your voice phone and play a distinctive "musical" tone to notify you of waiting mail. It can also be used as a phone-activated alarm clock.

Another product, the **$195** ***Major Pager*** from M. B. Murdock & Associates — **(813) 541-5876** data — works with Worldgroup systems from Galacticomm. It can send text messages to alphanumeric pagers. Both products have the notable benefit of permitting pages without revealing the recipient's pager phone number — a plus for disrceet persons seeking online indiscretions.

DATABASE ACCESS FOR WEB SITES

"I don't want to teach myself PERL or other CGIs. WebBase is something I can pull out of a box and install myself. Besides, our Web has to be fast and maintainable," says Matt McWhinney, technical architect at Ameritech Corp. ***WebBase***, from ExperTelligence Inc. — **(805) 962-2558** voice or **http://www.webbase.com** — is a web database server that allows easy and powerful access to existing databases via a Web site. It works with any web server, and is compatible with over 50 database formats including SQL, MS Access, FoxPro, Excel, Btrieve, dBase III & IV, Paradox, Oracle6 and Oracle7 and formatted text files. A 30-day demo version can be retrieved from the company's website; also download the examples and help files. The asking price is **$495**.

SLIP/PPP FOR EXCALIBUR BBS



Mortimer On-Line, a third-party developer for Excalibur, a Windows BBS package, has released a program called ***Flipsock*** that allows users to browse web sites, telnet, ftp, IRC, etc., with any browser without a SLIP/PPP connection — or the configuration problems that plague sysops. Callers can simply log on to an Excalibur system, select the Flipsock option and minimize the Excalibur window, then load Netscape or another browser and enjoy seamless connection to the Web. A two-node Flipsock costs **$199**; 8 nodes run **$499** and each additional 8 nodes cost **$349**. Mortimer On-Line: **(604) 294 - 2995** voice, **(604) 294 - 2955** data or **http://www.mortimer.com**

COMPUSERVE TESTING ISDN ACCESS

CompuServe began testing 57.6 Kbps ISDN access in eight cities during September. The v.120 nodes support just one B channel because standards do not yet exist for binding two B channels or more to provide 128 Kbps and higher connect speeds; CIS does not want to endorse any particular vendor's binding scheme at this time. For lively discussions of CIS' choice of cities, **GO ISDN**. For current lists of ISDN-enabled nodes, **GO PHONES**, select "Access Numbers and Instructions," then select "Network Announcements."

80 PERCENT OF FORTUNE 500 NOT ON WEB

Webmasters still hunting for six-figure contracts have plenty of game to stalk. Black Star, a 35 year-old photojournalism consulting firm turned "Internet Developer," reports that 102 of the Fortune 500 have web sites, leaving 398 potential big-time customers. Prospecting will be best in the lower 250, where only 18 firms have web sites. To obtain a list of Webulized firms and their URLs, **mailto:john@blackstar.com**. The firm's own web site at **http://www.blackstar.com** is an edifying tour of photographic resources, product reviews and web page design; check it out.

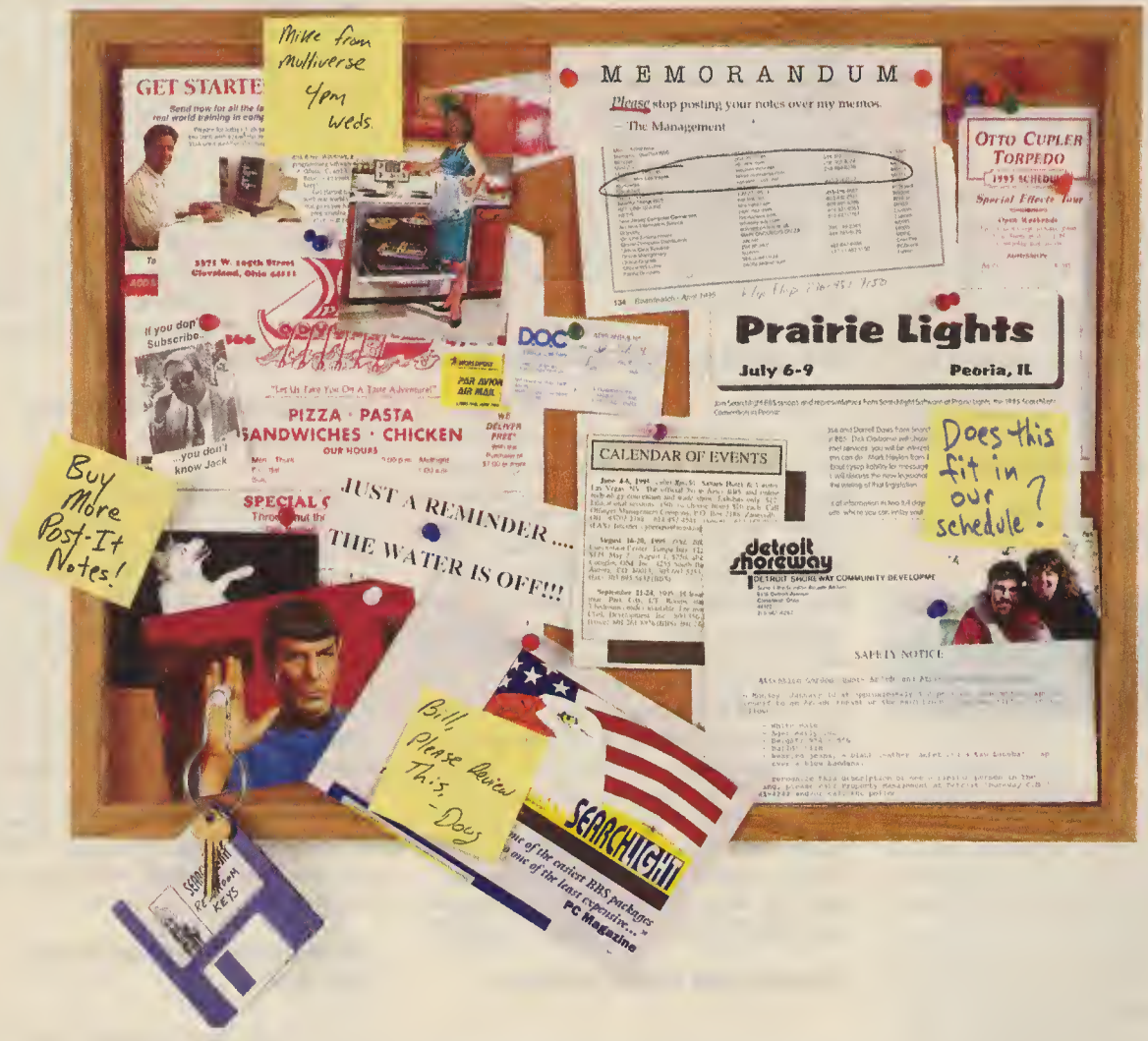
"ISDN UNIVERSITY" AT 3COM WEB SITE

3Com Corp. has a useful collection of backgrounders, white papers and product literature for sysops who want to learn ISDN. The company's web site at **http://www.3com.com** includes a worldwide directory of 3Com dealers and field offices. ISPs and sysops interested in selling 3Com's ***Impact*** ISDN terminal adapters should contact Reginald P. Best at **(908)888-4570** voice or **mailto:best@accessworks.com**

WEBLISHER AUTOMATES HTML CONVERSION

Keeping the printed and Web editions of ***Boardwatch*** in synch with each other is a never-ending nightmare. Authors' biographies change, for example, requiring us to update HTML code as well as the next print edition. ***Weblisher***, an add-on for popular word

If you can use this,



A successful bulletin board has to be easy to use. Although the one pictured above is about as user friendly as you can get, the manufacturer left out a few of the key features you might need to get up to speed on today's information autobahn.

At Searchlight, we help you bridge the gap with BBS software that puts the emphasis on "easy". Our built-in GUI gives your callers the kind of intuitive interface they already understand. Information browsers make it easier than ever to select, view and download messages and files. Because we use the non-proprietary RIPscrip protocol, callers don't need a special client program to call your BBS. They can use any RIP or ANSI compatible terminal. And Searchlight is the world's only BBS software that gives you a local RIP interface—so you can see and use graphics on *your* computer (or any computer on your LAN).

But don't let our good looks fool you. Unlimited message and file databases, seamless Internet compatibility and a built-in DOS doorway are just some of the features that make Searchlight powerful BBS software. And Searchlight supports RIPscrip 2.0, the new multimedia language from TeleGrafix that lets you incorporate JPEG images and digitized sounds into your BBS quickly and easily.

you can use this.



Since running a user friendly BBS system shouldn't be hard to do, Searchlight makes your job easy, too. From a simple install program that automatically configures your modem, to mouse driven Sysop tools and menu editors, you can set up a custom BBS in just minutes. If you need help, the best technical support in the industry is just a phone call away—and it's *always* free.

We even make it easy to try Searchlight. Our fully functional test drive does everything our regular product can do—we even include our complete manual on disk. To get your free copy, or find out more about Searchlight, call us today. And let us start making life easier for you.

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processors, allows users to maintain a single set of source code for publishing material in both printed and online hypertext formats. When a document's content is changed, you just update it in your WP program and "Save As Web Pages" to update both the print and HTML versions. Weblisher makes original document layout just as easy, using an interactive "wizard" to guide the user through document style conversion, conversion and embedding of images or OLE objects, specifying global properties such as headers and footers. Once the links between WP and HTML styles are set, you needn't worry about editing two versions of a document again. Available in Q4 1995, Weblisher lists for **$495**. Contact: Digigami Inc., Sue Boyer, **(619) 551-9559** x13 or **mailto:sue@digigami.com**

8 MBPS OVER HOME PHONE LINES

Analog Devices is the first chipset maker to launch a product meeting the ANSI specification T1.413 for Asymmetric Digital Subscriber Line (ASDL) technology. The company's ***AD6333*** chipset achieves rates as high as 8 Mbps over ordinary copper phone lines. Westell Inc. plans "to quickly incorporate the AD6333 into its ASDL products, according to VP of Business Development Bill Rodney. The chipset is currently available to OEMs; mass-market products will not arrive until "early 1996." Contact: Analog Devices Inc., **(617)937-1428** voice or **mailto:comms.div@analog.com**

SOFTARC LAUNCHES WINDOWS NT SERVER

The FirstClass Server for Windows NT is a 32-bit version of SoftArc's existing ***FirstClass*** communications server, a highly popular groupware client/server solution with over 3.5 million users in 15,000 sites worldwide. FirstClass for Windows NT supports over 100,000 user accounts per server and allows simultaneous connections among 250 users via network or remote connections. "FirstClass now supports significantly more users per server than products such as Micosoft Exchange or Lotus Notes, " notes SoftArc president Steven Asbury. A five-user license sells for **$495**. Additional user licenses range from **$79** to **$35** per user depending on volume. Contact SoftArc Inc., **(905)415-7000** voice or **mailto:dallas@softarc.com** for details.

XIRCOM DEBUTS V.34 PC CARD MODEM

Xircom Inc., famous maker of portable Ethernet+Modem PC cards, has introduced its first modem-only card for road warriors. The **$325** ***CreditCard Modem 28.8*** is the first in a series of budget-minded modem cards the company will launch. The product includes a Motorola 68302 16-bit processor, 4 Kb of onboard buffer, a surge protector, flash ROM for easy upgrades, Windows 95 support and a lifetime warranty. Contact: Xircom Inc., **(800) 438-4526** or **(805)376-9300** voice; **http://www.xircom.com**

PSINET EXPANDS TO CANADA, ISRAEL

Performance Systems Intl., one of the largest ISPs, is aggressively expanding its international operations. First, in a proposed stock-swap deal involving PSINet, NetManage Inc., Elron Electronic Industries Ltd. and NetVision Ltd. (a subsidiary of NetManage), PSINet would acquire 33 percent of NetVision, Israel's largest ISP. Elron Electronic Industries is a 33 year-old Israeli conglomerate involved in medical diagnostic imaging, defense electronics, information technologies, manufacturing automation, semiconductors and software. What it's doing in this overcrowded deal is unclear, but seems to have something to do with "providing the business community with... electronic commerce."

Second, PSINet will extend its network to 15 Canadian cities — Calgary, Edmonton, Vancouver, Winnipeg, Halifax, Guelph, Hamilton, Kitchener, London, St. Catherines, Toronto, Montreal, Quebec City and Saskatoon. Each city gets leased T1 lines. PSINet Limited is the Canadian subsidiary formed to handle this new market; it will initially employ about 20 people. Contact: Performance Systems Intl., **(703)904-4100** voice or **http://www.psi.net** ◆

NETSCAPE DEBUTS NAVIGATOR 2.0

Netscape Communications Corp. announced on September 18 a major update to the popular Navigator web browser and development tools. The production version is to be ready in December. However , the public beta version of the browser won't be available for downloading until "next week," after this issue goes to press. This oddity is probably due to Netscape's rush to respond to the security flap described below. Look for a hands-on test drive in our December "Compleat Internaut's Toolkit."

Navigator 2.0 sounds like a complete operating system for Web junkies. Some 26 pages of press release detail the new features for users and page designers, including

SECURITY — JUST WHEN YOU THOUGHT YOU HAD IT

On September 16, a pair of first-year graduate students at the University of California at Berkeley announced that they had cracked Netscape's builtin encryption algorithm. Computer science majors Ian Goldberg and David Wagner say it took them just "two or three days" to reverse-engineer Navigator's session encryption key generator. They've written a program that will let a moderately knowledgeable person equipped with a modest 486 PC decrypt a message in "less than a minute."

The flaw seems to be due to sloppy programming; the encryption key is generated from time and processor data, much of which can be known or guessed in a few tries by an outside party. Knowing part of this "random" data eliminates vast subsets of possible keys, making it much easier to crack a key than its 40- or 128-bit size would otherwise indicate.

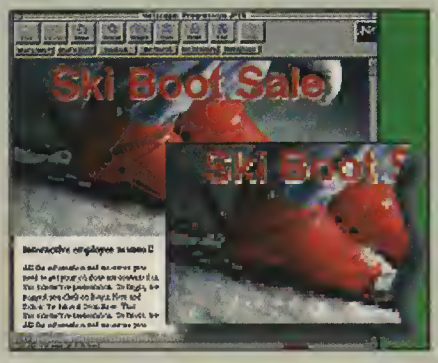
Netscape is scurrying to correct the flaw, promising beefed-up versions of Navigator 1.x products by "next week," approximately September 23-30. (Now you know why the company's ftp site has been swamped lately.) Version 2.0 will incorporate the same changes.

Version 2.0 users who no longer trust Netscape's builtin security will be able to use public encryption keys from third-party services, such as

VeriSign, Inc. (See **http://www.verisign.com** for details). Netscape will maintain an online directory of e-mail names and public keys for such users' convenience.

ENHANCED PERFORMANCE

Version 2.0 supports client-side image mapping, which will relieve server processor burdens. It includes progressive JPEG display, so you can watch a JPEG image form in successively clearer iterations (a masochistic exercise). Multiple simultaneous streaming of video, audio and other data formats will keep the neo-literate user entertained and further fuel demand for increased bandwidth connections.



Multimedia enhances Netscape 2.0

The Bookmarks feature has been improved with the ability to drag a hypertext link from any page into one's bookmark directory, and a hierarchical system of folders to keep things organized, Since we haven't seen the program, it's unclear at this writing whether this feature is an integration of the Smartmarks add-on module or a whole new ballgame.

INTEGRATED E-MAIL, ENHANCED NEWSGROUPS

A new offline e-mail reader lets one embed live hyperlinks, multimedia objects and images in messages; drag-and-drop messages from one folder to another; use POP3 and SMTP servers, MIME attachments and Secure MIME encryption and digital signature security. The 32-bit version supports MAPI and other Windows NT or Windows 95 services.

The browser's builtin newsgroup reader has also been improved with similar capabilities, plus support for multiple new servers and fully-threaded news reading.



E-mail and Newsgroups Built In

JAVA & "LIVE OBJECTS"

Navigator 2.0 supports Sun Microsystems' Java programming language, enabling a host of interactive, platform-independent functions. (See our Java review in the August 1995 issue). Version 2.0 supports interactive multimedia content, including Netscape's new "inline plug-ins" capability, which allows developers to include files such as Adobe Portable Document Format (PDF) documents. Users will need to obtain and configure specialized readers for such files.



Frames provide split-screen flexibility

"Frame" technology is a new page presentation feature that enables display of multiple, independently scrollable panels on a single screen, each taken from a different Internet site. A frame can also be frozen in place as a user scrolls through other information on a page; then it's called a "ledge."

JAVA-BASED SCRIPTING LANGUAGE

Page designers need some sort of "glue" to paste together all the new features in version 2.0. A new scripting language designed for anyone who can write HTML code provides this adhesive. It gives page designers precise control over events such as user mouse clicks, objects such as PDF documents and sound files, and time-based logical events, such as the ability to display an image of dusk over Hawai'i at a given hour.



Built in Page Publishing Tools

NAVIGATOR GOLD: EVERYONE'S WEB PUBLISHER

This is the first time we've seen an HTML editor bundled with a browser for end-users. "Just as word processing software opened up the world of desktop publishing to anyone, Netscape Navigator Gold makes every online user an Internet publisher," said Mike Homer, vice president of marketing at Netscape. Using WYSIWYG editing tools found in this premium package, end-users can create and publish Web pages in real time. (Will television ratings take a dip as people immerse themselves in creating web pages?)

Navigator Gold supports drag-and-drop element insertion, Live Objects and all the other enhancements of Navigator 2.0 and the HTML 3.0 specification. Future developments are accommodated by a Program Editor which lets users add support for new HTML tags or other features not built into Navigator.

Both the regular and Gold editions of Netscape Navigator 2.0 will be available for Macintosh, Windows, and X Windows environments in the fourth quarter of 1995. Navigator pricing starts at **$49** for a single-user license, while the Gold edition starts at **$79**. Volume discounts are available from Netscape and prices may vary from one reseller to another. Contact: Netscape Communications Corp., **http://home.netscape.com** or **(415)528-2555** voice. ◆

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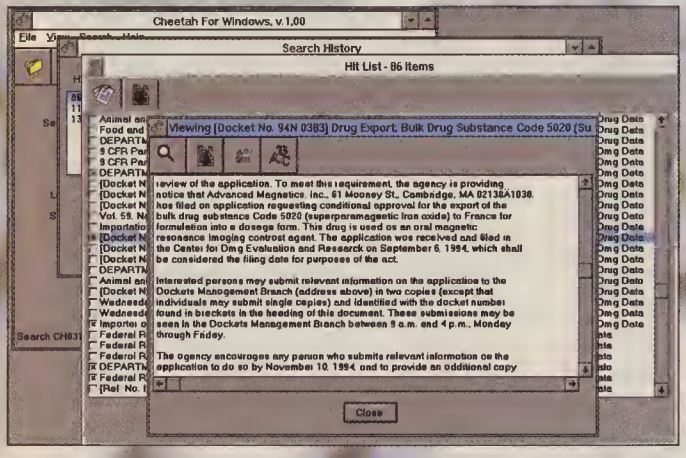
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Screen shot from APDI's new Cheetah for Worldgroup Product

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President Mark Burnett in one of APDI's Computer Rooms

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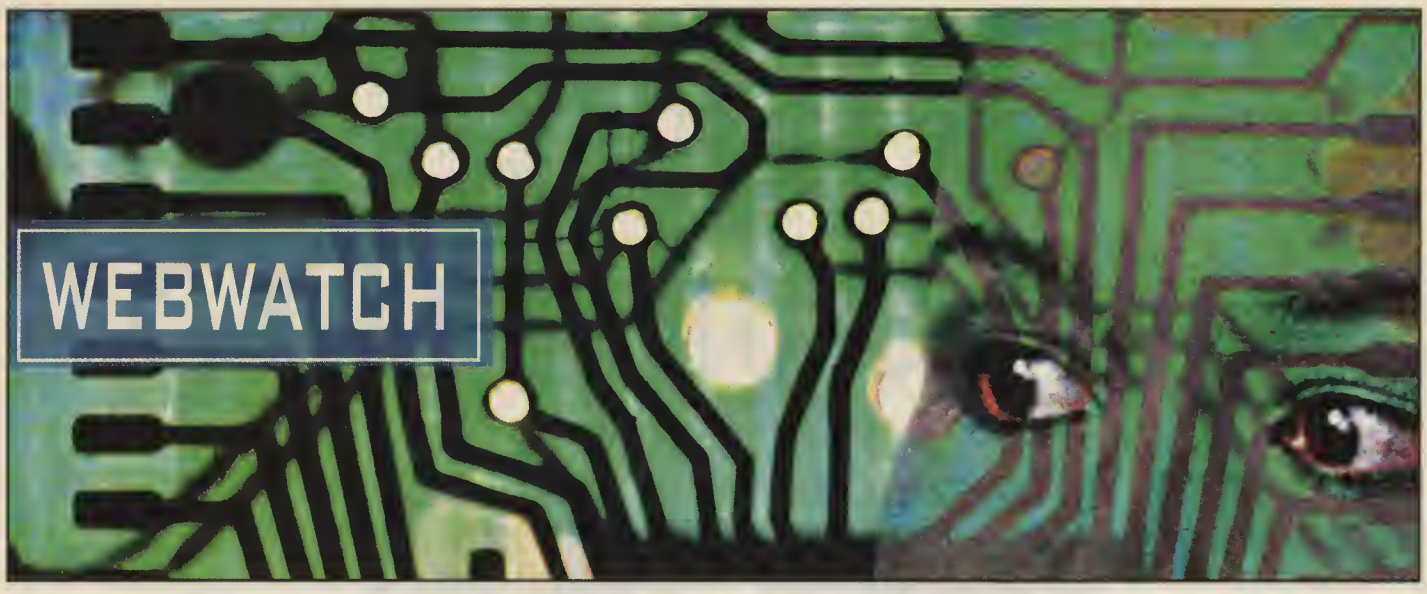
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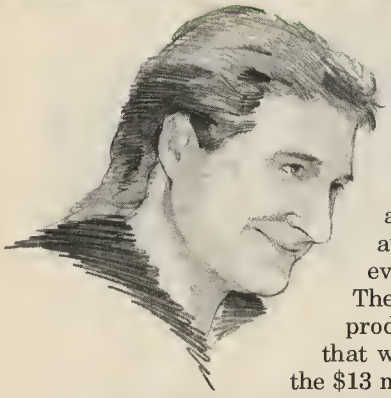
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BABB'S BOOKMARKS by Chris Babb



Chris Babb is a Senior Systems Engineer for Control Masters, Inc., a Systems Integrator located in Downers Grove, IL, where he designs industrial automation software by day. He's a member of the Aquila BBS/Internet Team by night. Chris has worked with Aquila since 1990 and currently handles technical support, Web design and construction, Internet training and various other online and offline duties. In his meager spare time, Chris enjoys music, playing bass guitar, the outdoors and his kitties. You can reach Chris via mailto:chris.babb@aquila.com

Have you recovered from the blitzkrieg of Windows 95 hype and advertising that heralded its long awaited release? I can't say that I have ever seen anything like it in my life. The questions that remain are... is this product really worth the **$200 million** that was spent to introduce it? How about the $13 million Microsoft paid for the rights to use a tired old Rolling Stones song in the TV commercials? (Actually I would have used Pink Floyd's "Welcome To The Machine" instead.) Will this operating system really fly? Will Bill Gates try to buy the bones of the Elephant Man next? Will the OS/2 and Mac users ever quit bitching about it?

If you don't like Microsoft and don't like Windows then simply don't use it. You're wasting your breath, your time and my bandwidth in attempting to get anyone to switch when they have the kind of investment in software and the software choices that Windows users have. I have thousands of dollars invested over the last 5 years and thousands of hours invested learning the ins and outs of Windows and Windows 95. If it works for me (and it does) and works better than Windows 3.1 (and again it does), then I thank Microsoft and Bill Gates for giving me a tool to do my work better and faster.

Speaking of thanks, I want to wish everyone a Happy Thanksgiving! I think we all owe a lot of thanks to everyone in the communications industry for getting us where we are today. My life is fuller and I have been able to learn more because of all of them. I also want to extend an extra special Thank You to everyone who reads Babb's Bookmarks and those who have been kind enough to send me piles of interesting sites and lots of positive comments about what I am doing. It's very gratifying and makes it easy to sit in front of my computer to fumble-finger my way through a new column every month.

There were some excellent submissions and it's only fitting that they and the names of those who sent them to me be presented for your enjoyment. While I can't put every one of them in the column, I have put a special "Reader Submitted" page up on my Web version of Babb's Bookmarks.

Also, while Windows 95 makes things easier and more stable for almost everyone (I said *almost* everyone), there are still some parts that require more information than Microsoft is willing to provide (I'd still like to have a printed manual!). To this end I will present you with what I feel is the definitive Windows 95 Home Page. Here come the sites!

READER SUBMITTED SITES

The PostMaster

http://www.netcreations.com/postmaster/
Submitted By: Ryan Scott — Netcreations



With all of the lists, newsgroups, web crawlers, directories and other ways to announce your own awesome Web pages, you could actually spend more time posting announcements than developing a page. Fortunately, someone is offering a fine way to clot the bitways with pointers to Web pages everywhere. My only fear is having so many announcements going out to so many places that they eventually are ignored. Regardless, this is something that anyone who has a useful web page should seriously check out.

This page allows you to fill out a single Web-based form with information about your Web page. Then, with a single click of the send button, your page is posted to virtually every list known to the Web, including Lycos, Net-Happenings, World Wide Web Worm, NetGuide, MagicURL, Infoseek, Yahoo! and NCSA's What's New to just name a few. The form is quite detailed and will certainly take a while to fill out but covers the description and submission formats for all of the sites and lists that it posts to.

Currently, free submissions will be posted to approximately 2 dozen sites. If you want to get listed in more places, you can purchase a "Key" that will post your submission to over 300 lists, sites and other resources. The keys cost **$500**/key or **$1000**/4 keys. Serious bucks for a serious service. If you have a service, product or other business on the Web, this may be an excellent investment. Even the free submission should generate enough traffic to really irritate your Webmaster and make your page known to a wide audience. All submissions are posted almost immediately to all of the associated lists and sites and you are e-mailed a response to let you know the results. Outstanding!

Also be sure to check out the Netcreations Home Page at **http://www.netcreations.com/index.html**. These people are very imaginative and the sites they've created are some of the best the Web has to offer. Certain to keep you hopping for a while.

CJC Homepage

http://www.asb.com/usr/cjc1/
Submitted by Charles J. Cangialosi

Charles just made this list by a nose hair. As I was writing all of this up, I was interrupted by the ding of my e-mail program, saw his submission, and thought that I should at least take a quick look. I was glad I did.



Charles states, "I hope to create a Web site that is exciting and fresh." I think he is well on the path to both. These pages are filled with provocative quotes, thoughts and excellent graphics, punctuated by hidden links that take you to more thoughts and even more awesome graphics. Hidden links are extremely cool and I hope to see more of this from other sites in the future. They give things a sense of fun and add a bit of spice to the otherwise mundane process of just clicking on what you see.

Lately, I've been enamored by graphics. I've been using Fractal Painter quite a bit and am blown away by some of the excellent effects that can be created. Charles uses Fractal Painter, Adobe Photoshop and Macromedia Director for all the graphics throughout these pages. Charles seems to have this thing about hands and many of the graphics on these pages prove that point. There are also many animations served up as you click your way around.

Charles has created a fine example of what I consider to be the character of the Web. I have always maintained that the personal pages are what I find to be the most compelling part of the web and this site fits that perfectly.

KPIG Radio - CyberSwine World Headquarters

http://www.kpig.com/
Submitted By: Robert B. Eaton



KPIG Radio Online is the Web home of a radio station out of Freedom, California. The station is at 107.5 FM and features a blend of music consisting of adult rock, acoustic music, blues, country, Hawai'ian, cajun, bluegrass, and folk. Quite a range of styles. What makes this page unique is that you can listen to the station via the Realaudio Client software (available at **http://www.realaudio.com/**).

The main page offers links to information about everything KPIG. The station claims to offer a more liberal style of programming than most radio stations provide and allows their DJs almost total control over the format. No pre-programmed playlists for these guys. The motto here is that they'd rather be exciting than safe and are willing to take a few chances here and there. They do.

If you want to meet the DJs, just pork your way over to the Travus T. Hipp and Wild Bill Page where you can listen to them on the air and in selected samples. Be sure to wallow over to the Travus T.Hipp pundit-at-large page where you can find out a little more about how Travus "pontificates to the Pigsters" every day on a variety of subjects. The TT Hipp story should be available by the time of this printing. Also visit Pig People to learn even more about these two and all the other DJs of KPIG.

A selected listing of various artists' home pages is available, as well as Realaudio and "Unreal" humor pages that are filled with some pretty funny jokes, sayings and stories that will have you squealing in delight. Various other links to KPIG's playlist, listener mail and "Porklinks" help to round out this great site.

Saving the best for last, be very sure to click on the Live KPIG Netcast. This is a new service that offers realtime audio feeds via the Xing StreamWorks (tm) audio server. I've tried this out and have to admit that it caused me to kind of detonate in my office. This is very cool, very usable and I hope development continues. Basically, you run the Stream Works client software (which is available on KPIG's page), connect to the KPIG server and you have access to live radio talk and music. There are also a few other surprises mixed in (like video) to get the juices flowing so be sure to give this a thorough going over.

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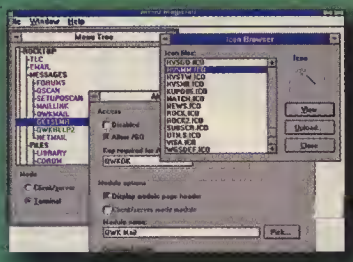
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http://www.omsinc.com/hotsauce.htm
Submitted By: Earl J. Niemoth

I had a hard time deciding whether this site was real or not. But, it was submitted to me and I feel compelled to write about this strange but true site. I love hot stuff almost as much as I love speed. I like it hot to the point that I have sweat pouring down my brow and spicy to the point that my mouth needs more than a fire extinguisher. I have a friend who made some salsa out of hablanero peppers that sent my tastebuds packing for about a week. Great stuff!



The reason I had such a hard time determining if this site was for real started with the first paragraph I read when I visited this site:

"Welcome to the CUNTRY BUNKIN'S HOME PAGE. The first roadside stand on the Information Super Highway. I am your proprietor Bubba Leroy.

"I'm mostly known as Bubba ever since my baby sister couldn't say Curtis and couldn't say brother too much better. So, she called me Bubba and everybody else sorta follered along."

Well, a spell checker could have helped me along here, but then the flavor of this site would have been lost. The whole thing follows along these lines and actually makes this a somewhat endearing site to visit. My next step will be to actually order some of the delicious sounding and looking items.

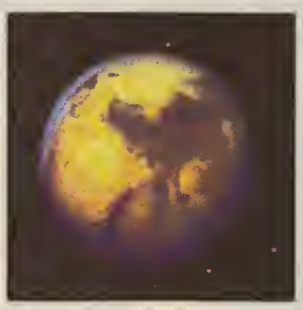
So what does Cuntry Bunkin Bubba have to offer those who would treat their mouths and bowels to the fires of south Florida? Try jams, preserves, pickles, relishes, hot pepper sauces, boiled peanuts and pork rinds, to name but a few. There are links to pages that cover all of the above that describe the product, its ingredients and the prices. Some of these recipes sound pretty normal. Some sound pretty strange.

For jams and preserves you have blackberry, raspberry, blueberry, peach and apricot. Pickles and relishes offer up some interesting possibilities with cucumber chunks, bread and butter pickles, zucchini relish, sweet corn relish and cranberry & rhubarb chutney. There is an entire line of vinegars that feature garlic, cranberry, tarragon and sweet raspberry. The hot sauces all feature at least 3 different chilies and have exotic names like Bubba's China Syndrome Pepper Sauce, Cactus Pear & Hot Pepper Marmalade, Alligator Alley Asphalt and Bubba's Mean Jo' Green Hot Pepper Sauce - For those brave enough to exclaim "Mo' Hotta-Mo' Betta!" Weird but true. I think I'll try the latter. I'm brave and my tastebuds need a kick in the butt once in a while.

The pricing for all of Bubba's stuff is actually pretty reasonable but I'm a little disturbed at the lack of an e-mail address and/or phone number. An order page is available that gives you pricing for all of Bubba's products and there is a printable form and address to send for your taste of southern Florida. Is this for real? I'll let you know.

Flat Screen Space Theater

http://ucsu.colorado.edu/~peterscc/Home.html
Submitted By: Robert Ton



Flat Screen Space Theater is the World Wide Web's First Online Virtual Planetarium Facility. It works something like a real planetarium but without the dome, the comfortable chair/bed and the feeling that you're laying outside on the ground, looking up at the sky.

The show currently running starts with the question, "Have astronomers ever seen a black hole?" The answer waits for you at the click of your mouse with an indepth look at black holes. What I liked most about this section was its easy-to-read and comprehensible information. It's filled with analogies that help explain the mysteries of what a black hole really is and its effects on the universe.

The main show is a tour of Mars, Saturn and the stars using Hubble Space Telescope images and other images gathered by the Space Telescope Science Institute, NASA and ESA, to name a few. All are excellent quality and are enhanced by the interesting and sometimes philosophical narrative text that accompanies them. By the time I was done with the show, I felt more worldly in my knowledge of the items presented. An excellent use of the Web and its abilities.

Other items of interest are the Reference Library which lists and describes astronomy books from general to advanced, a collection of space and astronomy related Web sites, a gift shop with links to astronomical and space-related products and a visit with the Virtual Director Of The Flat Screen Space Theater, Carolyn Collins Petersen, whose accomplishments and biography are available.

I wish I had known about this place when I did my Space/Satellite piece a couple of months ago. A worthwhile addition to your bookmark list.

Bad Answer Man

http://www.tiac.net/users/lou35/
Submitted By: THE BAD ANSWER MAN!

Bizarre is a fitting word for this site. After reading some of the answers that the Bad Answer Man provided, I started thinking that a Ouiji Board, a Magic 8-ball or 1-900-PHYSICS would be a better source of quality information. But then again, what fun would that be?

The Bad Answer Man will answer any and all questions. The first answer you are given is "Read the reply and do exactly the opposite!" On the main page is the best question of the month. This month it is something about firecrackers and guinea pigs. Sounds like a mess. The Bad Answer Man came



through with a surprisingly better answer than blowing the poor pig into sausage meat. A link to more questions and answers will leave you a little afraid to drink coffee at the office and the feeling that no matter how bad things can be, you would never ask questions as stupid as these. You may be wondering to yourself, why is Babbman writing about this site? Well, because I like creativity and I like things like this. While this site is really just in its infancy, I think we should fill up his pages with some useful and meaningful questions, like "Will O.J. walk and if he does, will Ron Goldman's dad walk after he blows O.J.'s head off?" Questions away!

THE WWW Speedtrap Registry

http://www.nashville.net/speedtrap/
Submitted By: Cliff Urr



I don't recommend breaking the law. I don't break the law. That's why I have a RADAR detector. It's paid for itself a hundred times over. Well, almost. It has let me down a few times. Mainly when the nice police officer waits for me to get close and zaps me. Or when I forget to turn it on or up. Such is life.

The Speed Trap Registry was started in Feb. '95 in an effort to cut down the number of speeding tickets resulting from speed traps. The proper disclaimer is presented at the bottom of the page. "This page in no way encourages speeding and recommends you always follow the posted speed limit. However, what you do is up to you." Basically, this is an excellent accounting of many of the speed traps set throughout this country, along with some other useful information on the police's practice of cooking all of us with Radar Guns day in and day out.

By clicking on a state's name you get a listing of some of the major speed traps in that state. It would be nice if it were grouped according to region or county within the state but I won't argue with the information presented. For grins, I clicked on Illinois just to see what was listed and if it was accurate. I was happy to see that at least 5 speed traps that I already knew of were actually listed and were surprisingly accurate. I also found 2 that I didn't know of that made me a little nervous. I sure hope that my speedometer is accurate to within 1mph.

Also provided for your lawful perusal is a set of FAQs covering everything from the problems with Radar Guns to Lidar Detectors and information on how to lawfully defend yourself in case you are at the wrong end of the gun.

All in all, this is an interesting and useful sight for anyone who drives. The information supplied is surprisingly accurate and updated whenever anyone has the desire to submit a new and exciting speed trap to the registry (made possible through a link on this page). With some local yokels using speed traps as a cash cow and actually having the gall to stop people for going 1 mph over the posted limit (ridiculous but true), the need for a site like this site is real.

Dylan Greene's Windows '95 Home Page

http://cville-srv.wam.umd.edu/~dylan/windows95.html



The first thing you'll notice is that Dylan has become a ClubWin WebMaster. This means that this page will be updated regularly with the latest news and information about Win95 from the Win95 Team. It is also recommended that you use Netscape 1.1N and have a screen resolution of at least 800x600.

I enjoy the graphical layout of this page. Looks like Win95 to me. I like Win95, so I feel right at home. The amount of information available from these pages and from links to virtually every Windows '95 site on the Internet is really amazing. The attention to detail in the graphics and consistency of the pages makes this site easy and fun to use.

From the Start Menu, you can grab a copy of the latest Netscape and the latest WinNews. WinNews is actually pretty useful and I recommend it. Of course, you can get on the WinNews Mailing list by following the instructions in the latest issue, but that just isn't as much fun as reading it through the Web, is it? If you're looking for shareware, click on Programs. There is a list of almost every site on the Web where 32-bit shareware can be had, along with links to Microsoft software drivers and updates, an alphabetical listing showing the current status of Win95 drivers, upgrades for many different programs and equipment and even a bulletin board of "Drivers wanted" ads.

A listing of the current newsgroups is just waiting for the poor unsuspecting soul who wants 1000 or more messages per day. But, if you need answers to questions in a hurry and don't feel like digging through all of these pages for that answer, or if you enjoy the OS wars, wade through the mud (and mud slinging).

Some of the more important information, like Registry FAQs and how to see Win95 on the Internet, are available by clicking on Settings and Help, complete with matching icons. Settings takes you to a page filled with information on how to configure TCP/IP for simple Internet access, connecting to TIA and to something that I see as an important step to true internetworking: WINS.

I have played with WINS a bit and it's really cool. By entering a few numbers in the TCP/IP setup panel, you have the ability to connect to another hard drive on the Internet and display its contents in a Win95 folder. From there, that hard drive is essentially an extension of your desktop. Double clicking on a DOC file will launch WORD. Double clicking on a BMP will launch MSPaint. Drag a file from that folder to a folder on your hard drive to copy it. Without using FTP. It still needs some work but there is a growing number of WINSable drives out there. I urge you to take a look at this.

The Help Icon will give you links to tips and tricks, troubleshooting techniques, FAQs, stumpers and all kinds of other information that is not included with Win95. There are some excellent tips out there that will make your life with Win95 much easier and more fun.

There is much for everyone to learn about this new Operating System and there will be a constant flow of new information, tips, tricks and software available over the next few months. It looks like Dylan has his work cut out for him and I would expect that you will find everything you need from these pages.

NUTSITE© OF THE MONTH

Well, I still have a lot to choose from for this month. Almost enough for a column strictly devoted to nuts. The question remains, do I feature sites that show destruction, disgusting things and just plain strangeness? Or do I play it safe? Well, I guess I have to stay within reason and show nice politically correct and socially accepted sites, lest some idiot decides to try something I feature, gets hurt or offended and then decides that through Webmosis, I forced him to do it and sues me. Then again, let 'em try.

Warning: This is a *really strange site* that contains information and pictures that may disturb, disgust and offend you. If you are ever-ready to be offended, don't look at it, and don't blame me if you do.

Chuck Farnham's Weird World

http://www.hooked.net/alex/people/chuck/
Submitted by: anonymous

I love this site. It's a true Nutsite if there ever was one. A unique collection of interesting information and disgusting pictures and themes. My kind of site.



The first thing you'll want visit is the Digital Deviations Gift Catalog. It lets you order all kinds of nifty items; real human finger or toe bone pendants, documents and photos of the JFK assassination and autopsy, the RFK assassination investigation file from the LAPD, Kurt Cobain's medical examiner's report, PeeWee Herman's arrest report and a pile of famous death certificates, to name only a few of the interesting items available for purchase.

For a sight to behold (and for those with iron stomachs only) drop in on the "daily stool." This is probably the most putrific sight on the Internet today (with the exception of some real sickos in the newsgroups) and I'm glad I didn't eat before finding this one. Be sure that you don't either. The architect of this fecal acropolis should get an award, or at least some Preperation H. To finish out the most obvious disgusting sights on this page, if you have a morbid curiosity of how Kurt Cobain looked after munching on a shotgun, click on the thumbnail in the center of the page for a larger-than-life mess of what used to be a talented musician. Oh, what the pressures of fame and money can do.

Have you ever wondered what space sex would be like? Click on "Documents covering sexual intercourse on space shuttle flights." It looks and reads like a real NASA tech brief, but is it true? When the Challenger Space Craft blew up, I was pretty sure that the astronauts were alive up until the moment that they hit the water. Click on "A transcript of the space shuttle Challenger's final minutes" to determine for yourself if this was possible. If it is, it's a truly heart-wrenching account of the final minutes.

Other notable information includes the last will and testaments of Richard Nixon and Elvis Presley, the Nicole Simpson 911 tapes, X-Rays of love (you've got to see this one) and a few other unique items that you won't find anywhere else.

A single visit to this site is enough for most everyone. Truly nutty. Truly sick. Something to amaze your friends with!

Well, that is all for this month. A round of applause for everyone interested enough to send me their favorite Web Sites. Please keep them coming in! Your input is extremely valuable and very much appreciated.

I have these as well as all of my past articles terminally available for your scrutiny at:

http://www.aquila.com/babbs.bookmarks/

Anyone who has a site that they would like to see in this column or who has any comments, good or bad (preferably good) should feel free to e-mail me at:

mailto:chris.babb@aquila.com
Happy Thanksgiving! ◆

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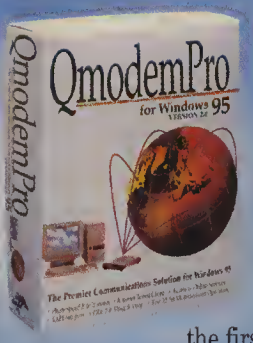
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* RSA Data Security, Inc. MD5 Message-Digest Algorithm

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PUBLISHING ON THE WEB

by Michael Erwin

Publishing on the Web - Part 10

CAPTURING SITE STATISTICS

By this time most of you have published some pages on the web. And now you want to know who is hitting your site. You want to know about your web site statistics. Well, this month's column is for you.

There are several reasons to know your web site's statistics. If you are publishing "marketing " related documents with your web server, you will want to know who your audience is. I told those of you attending ONE BBSCON that if you "think" you know who your audience is, you are wrong. Actually knowing who is hitting your site will help you sell your company on the cost of keeping a presence on the web. This becomes even more critical if you are renting web space to others. They will want to know the stats.

Another great reason for looking at the stats is to look for problem documents on your site. Problem documents can be as simple as a link to nowhere on your site or an image that is taking up half of your IP bandwidth.

The only way you can tell who is hitting your server or pages is to review the server logs. On really busy sites — like Yahoo! or Webcrawler — the server log can grow by 5 megabytes a day. Looking through a site log that can be 30-80 megabytes (or 2 megabytes for that matter) is going to take so long that the statistics are obsolete by the time you look through them.

Well, you are not the only webmaster to face this dilemma. Several other fine people have addressed this problem. Depending on what level of depth you want from the statistics, there is an appropriate package to help you analyze your log. For some of you, a simple access counter is all that you will need. Others will want complete stats, including hits during each hour, or the percentage of traffic a particular page is creating.

Let's go look at your logs right now. Normally your log files will be in **/httpd/logs** or **c:\httpd\logs**. You will notice that you have several different log files for access and errors. Look at the following line taken from **access.log** below:

198.77.21.2 - - [09/Jul/1995:22:03:17 -0400] "GET /htdocs/images/bw.gif HTTP/1.0" 200 12563

Each such line can be broken down into eight parts. The first part of this line — **198.77.21.2** — tells who made a a request of the web server. The second and third parts are missing from this example; they are represented by the - - string. They would contain RFC-931 identity and authenticated user name, respectively. Most NCSA-based servers do not use the RFC-931. If you see a name instead of the second -, that is the username defined with the access control. See last month's column about access control. The fourth part — **[09/Jul/1995:22:03:17 -0400]** — is the date/time that the request was made. In this case it was July 9, 1994 10:03pm. (The **-0400** is the time offset in relation to Greenwich Mean Time.)

The fifth and sixth parts are the HTTP request data, **GET** and **/htdocs/images/bw.gif HTTP/1.0**. This logs the method, URL path and the protocol version. The method could also be POST for forms or CGI posting. The seventh part of the entry logs the server response code. Some of the common response codes are

Common Web Server Response Codes

200=Sent
204=No Response
400=Bad Requests
401=Authentication required
404=URL Not found
500=Server Errors

The last part of the log entry is how much data was sent in bytes. In this case **12563** bytes were sent.

Now comes the tricky part. How in the heck do you sort through a huge ASCII log file to view the statistics? Well, here is where the fun begins. You have several choices. (Don't you hate it when I say that?)

The first choice is to write a program that parses out the log file while keeping track of the interpreted logged data, and puts the data in a nice readable format. You're right, I wouldn't want to do that either.

The second choice is to use a program that someone else has already written that does everything for you. That is my personal choice.

If you use Bob Denny's WIN-HTTPD or WebSite by O'Reilly & Associates, you can use a package called ***VB Stats*** that will generate detailed HTML reports.

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource. " It is available for US**$24.95**, plus US**$2.00** shipping in the United States or US**$5.00** elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. Michael is currently working on a new Web project at **http://www.eve.net/** you can also reach him at **mailto:mikee@access.mountain.net**

WebSite also has a page called QuickStats that will give you an overview of your server statistics. You can get VB Stats at **http://www.city.net/win-httpd/** — it generates output like Figure 1.



Figure 1: VB Stats output

Another great statistics package is Roy Fielding's **wwwstat**, available at **http://www.ics.uci.edu/WebSoft/wwwstat/**. WWWSTAT produces a beautiful HTML statistics document. This package is written in PERL. So if you are running a MAC, NT or OS/2 server, you will need to get PERL for your operating system. You can find PERL at **http://www.yahoo.com/Computers_and_Internet/Languages/Perl**

WWWSTAT generates several pages of statistics; a sample is shown in Figure 2. Each page provides a different perspective on your Web site's activity.

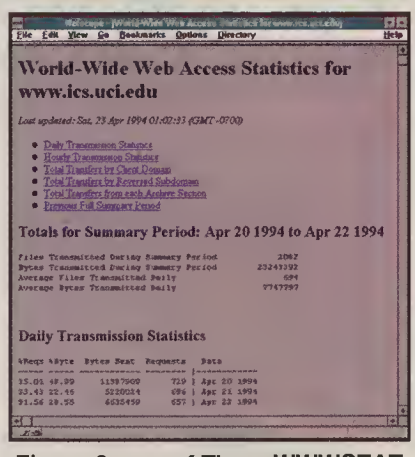


Figure 2: one of Three WWWSTAT summary pages

You will have to edit the WWWSTAT PERL script so that it reflects the name of your site and other particulars. Look at listing 2: (see next column, this page).

These are the lines you will need to edit for your site. Of course the **OutputTitle** is the generated HTML document's title and first heading. **LastSummary** is the URL of the previous month's documents. The **%M** will add the code to display a 3-character month code selection list. The **ServerHome** is the URL of the file you consider your **HOME** document.

A file named **country-codes** will come with the WWWSTAT program. The **countrycodefile** variable tells WWWSTAT

Listing 2: Customized Script for WWWSTAT

```
(wwwstat.txt)
$OutputTitle = "WWW Server Statistics for
www.boardwatch.com";
$LastSummary = "http://www.boardwatch
.com/Admin/%M.html" ;
$ServerHome = "/index.html" ;
$countrycodefile = "/httpd/conf/country-codes" ;
$access_log = '/httpd/logs/access.log';
$srm_conf = '/httpd/conf/srm.conf';
$AppendToLocalhost = ".boardwatch.com" ;
$mydom1 = "boardwatch" ;
$mydom2 = "com" ;
```

where this file is located and named. This also applies to the **access_log** and **srm_conf** variables in Listing 2; they hold the paths and names of the respective files.

AppendToLocalhost is the domain name the script will append to the local domains' host names. For example you may have a machine called **portal**. When the script finds that name in the logs it will add **.boardwatch.com** to it, forming **portal.boardwatch.com** in the statistics document. The last two variables, **mydom1** and **mydom2**, are your domain name and domain type. i. e., **boardwatch.com**.

Once you have edited the WWWSTAT script to fit your site, you will run it with the following command:

line:wwwstat > results.html

This command generates documents like the ones in figures 2, 3 and 4. Cool huh?

Now, here is a problem. What if you have a huge HTML document tree and get a lot of server document hits? WWWSTAT will generate a fairly large statistics page. Well, there is another great PERL script called Metasummary, a. k. a. USUM, written by Robert Thau. USUM summarizes WWWSTAT summaries. USUM takes the output of WWWSTAT and generates an HTML document like figure 3. This is a very brief summary of the server access log. USUM can be found at **http://www.ai.mit.edu/**

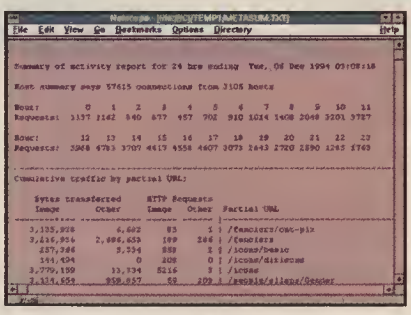


Figure 3: USUM summary of WWWSTAT statistics

The second problem you will soon encounter using statistics is that you will want a nice GIF of your server's statistics, like the one in figure 4. I like GWSTAT by Qiegang Long.

GWSTAT can be retrieved at **ftp://dis.cs.umass.edu/pub/gwstat.tar.gz**

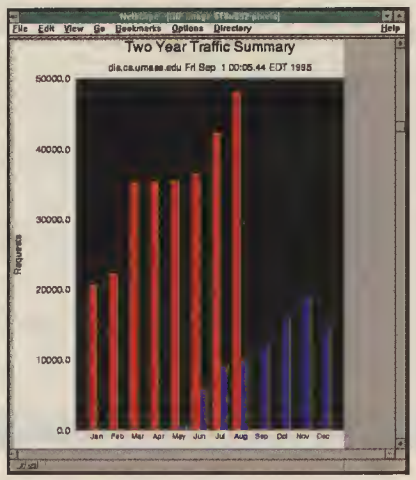


Figure 4 : GWSTAT generates graphical statistical summaries

You will also need several other packages that can be found at the GWSTAT site **http://dis.cs.umass.edu/stats/gwstat.html**. If you use a Linux-based WWW server you can go to **http://sjs.com/stats/gwstats.html** to get all of the needed executables.

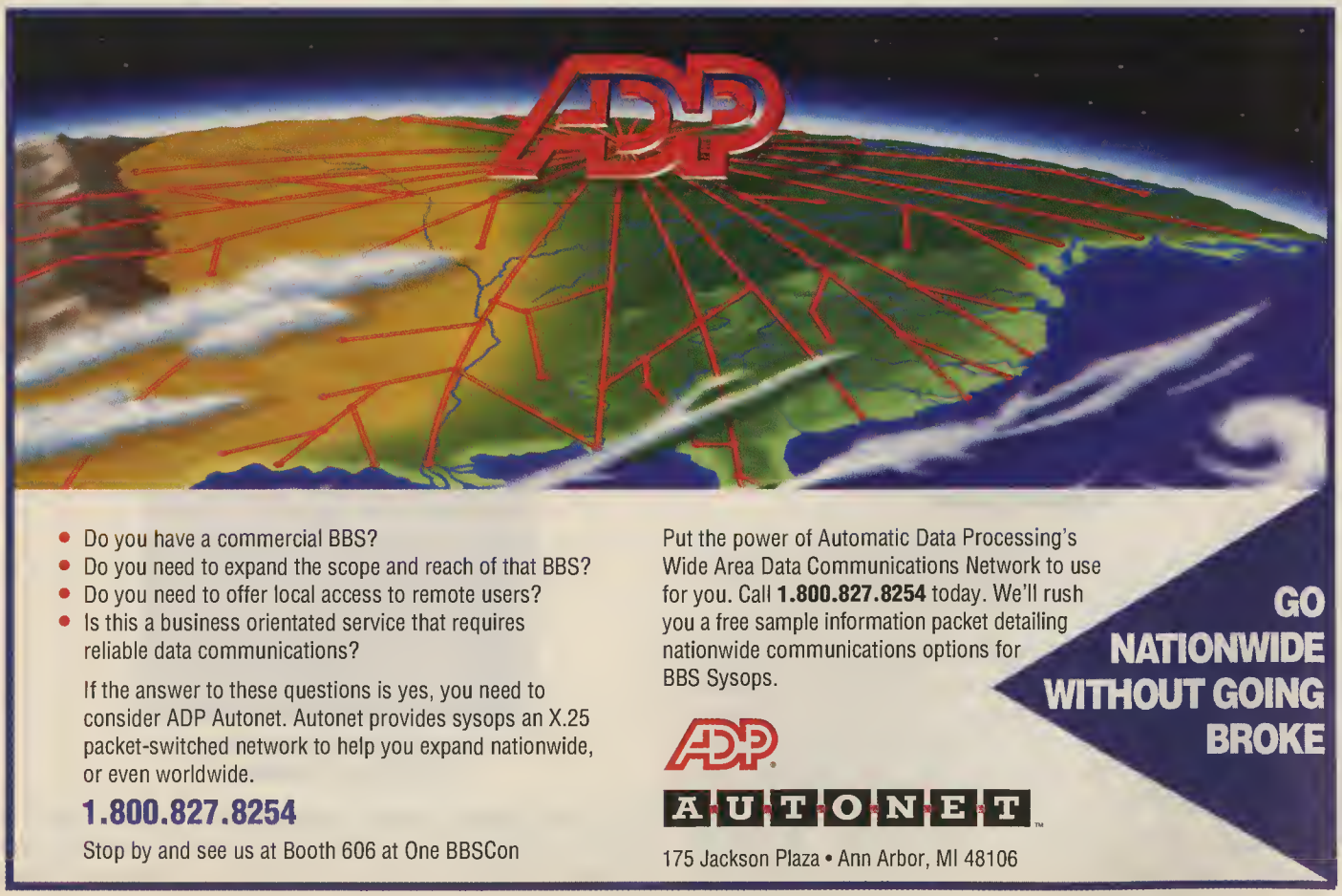
The other alternative is to use a spreadsheet package like Lotus 1-2-3 to generate a chart. You can capture or convert the spreadsheet chart to GIF or JPG format. As always, make these charts professional looking.

Providing accurate statistics to prospective and current customers is a nice professional touch. Notice that I said "accurate" statistics. All numbers can be forged. If you are renting web space, keep the web space provider honest by insisting on READ rights to the access and error log files. That way you can run WWWSTAT from your home directory. This is not a security breach. The provider does not have to give you any more rights to those files than READ only. If the web space provider is not willing to give you that right to the log files then I would look for another web space provider.

If you are renting web space, you can use these statistics to see if it is justifiable to put up your own full-fledged web site. If you can provide your decisionmakers with appropriate stats, they will be able to make an informed decision on whether to buy a company web server. Your marketing department can provide great support for a corporate web site. (Read "great support" as MONEY & DATA ENTRY)

Before we leave this month, I would like to take this opportunity to say "Hello and Thanks" to all those who attended my sessions at ONE BBSCON in Tampa. I enjoyed meeting and talking to all of you. It was incredible, and I can hardly wait till next year. Please let me know how your web sites are going and send me your URLs. I would like to show off what some of you are doing.

Next month we will start doing some Interactive web publishing, i. e., Chatting and Games. Did I say Games? Yep, I thought so. Till next month.◆



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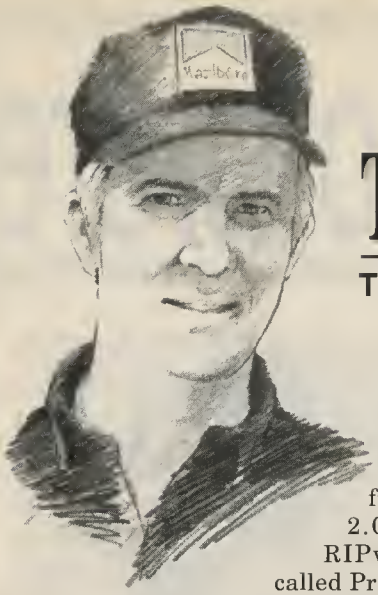
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TECHNOLOGY FRONT

by Jim Thompson
Western News Service

TELEGRAFIX TAKES RIPTERM AND RIPAINT TO THE NEXT LEVEL

After a long period out of the spotlight, TeleGrafix seems to have found new life. They have released version 2.1 of their terminal program, RIPterm, started full Beta testing of RIPaint (version 2.0) and are into full testing of RIPweb, an outgrowth of what was called Project Apache.

Best of all, RIP (Remote Imaging Protocol) has emerged as a more powerful and flexible program. Although there is a resemblance to the older version (1.54) of RIP, so many new features and abilities have been added to the RIP technology that it is now an entirely new program.

Jim Thompson is Managing Editor of Western News Service in Los Angeles, California. He also manages the Marlboro Racing News BBS. CompuServe: **72777,2677**, MCI Mail: **321-4127**, **mailto: jim.thompson @wnsnews.com**

RIPterm v2.1

Working with Telegrafix Communications, Inc. Chief Technical Officer Mary Hayton, Chairman of the Board Jeff Reeder has completely re-worked RIPterm. The new version has some 40 changes and bug fixes. Included is the addition of updated sound drivers. The new drivers clear up "a lot of problems with the Sound Blaster series of audio boards, as well as a number of compatible cards."



They have also "completely re-engineered the printer system of RIPterm." The new printer system adds drivers for "142 distinctly different types of printers. With 'compatible' printers (e.g., Epson FX compatible, HP Laserjet, Post-script, etc.) the list goes into the many thousands." There is support for full color printing, arbitrary sizing of printed images, various dithering methods for "custom output alteration," and options for changing the output resolution of a printer (if supported by the printer).

There is also better handling of temporary files, creating a more stable environment. All of the "pop-down" option boxes in RIPterm now accept hotkeys. The help system has been reorganized so subjects are in alphabetical order and more logically grouped.

All of the file transfer protocols have been enhanced. "The protocols now support file transfers over a 7-E-1 connection, as well as an 8-N-1 connection. This allows things like Zmodem transfers over the Internet via 7-E-1 connections, Ymodem transfers with CompuServe and other such environments." All of the bugs have also been cleared out from the CompuServe Quick B+ protocol. Along with this, Reader has upgraded the internal serial port drivers in RIPterm 2.1, clearing up some of the reliability problems with general communications.

Presently, RIPterm is available only as a DOS program. However, Pat Clawson, president and CEO of TeleGrafix Communications, Inc. says, "a full Windows version of the software is presently in the works and will be available soon." Although he would not commit to a firm date for the release of the Windows version, he did tell me he expects it by the end of this year.

He also assured me that a Macintosh version is under development in cooperation with ResNova Software. However, there is presently no date on the release of the Mac version. "This is a priority for us. I have a Mac Powerbook on my desk that I use every day. Each time I use it, I feel the pain of not having a version of RIPterm that will run on it. Yes, we will have a Mac version of the terminal software."

RIPterm requires an 80386 or higher CPU and at least 2-MB of XMS memory. RIP 2.0 allows for the transmission and receipt, over phone lines or the Internet, of fully integrated text, graphics, full-color photos and sound. The RIP terminal program (RIPterm) can display JPEG and BMP files. A device-independent bitmap (BMP/DIB) icon format that is new in version 2.0, provides cross-platform compatibility, so screens will reportedly display virtually identically on both PC and Macintosh computers.

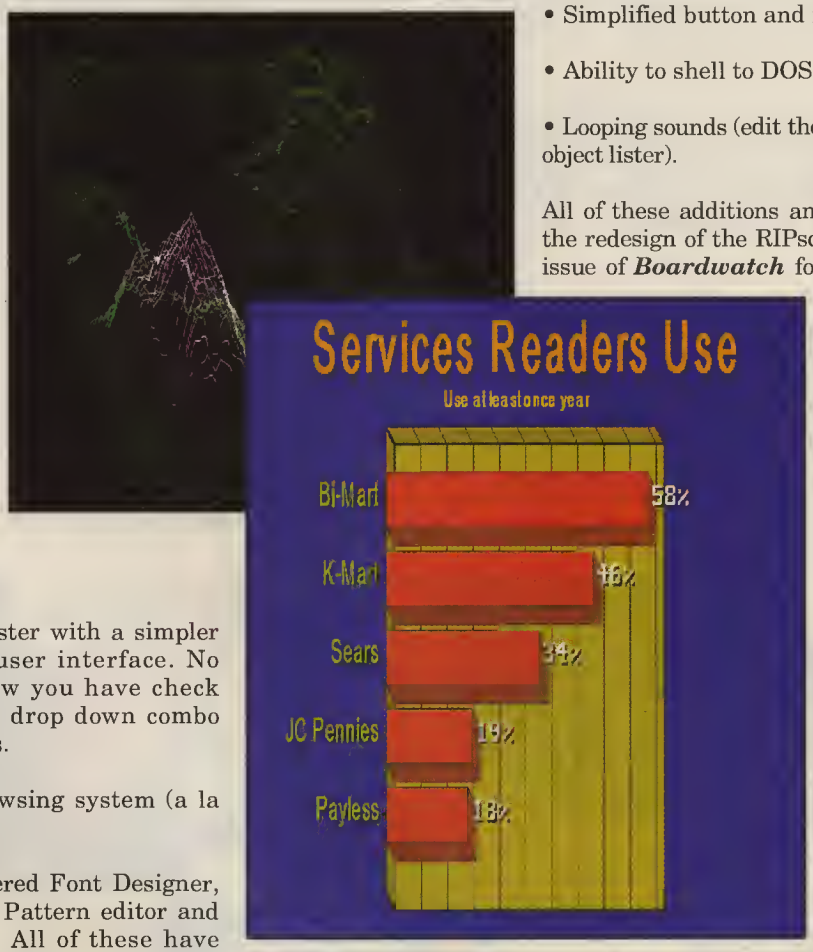
RIPaint ALSO GETS FACELIFT

RIPaint version 2.0 provides a powerful, yet easy to use environment for creating RIP screens. Those

who struggled with RIPaint version 1.54 will find using this newer version of the paint program much easier. The use of the Alt, Ctrl and Shift keys provides familiar territory for those used to programs like Corel Draw.

At the time of this writing, RIPaint had just gone into full beta testing, so there were several functions that had not yet been added. For example, there was no ability to move or delete objects on the screen. However, I was told that this and several other major features will be included in the release version.

One of the best and most powerful new features of RIPaint is the "curve system." Curves allow you to draw extremely complicated graphics with a single drawing command. With this command you can add several "segments" to an object. These segments can be a curve or a line which is manipulated via "control points." The result is the ability to create extremely complex images (custom designed fonts, maps, etc.) with relative ease.



HOST OF NEW FEATURES

Among the features and improvements in RIPaint version 2.0 are:

- An improved object lister with a simpler and more intuitive user interface. No more flag fields - now you have check boxes, radio buttons, drop down combo boxes and spin buttons.
- An enhanced file browsing system (a la Microsoft Windows).
- Completely re-engineered Font Designer, Button Designer, Fill Pattern editor and Line Pattern Editor. All of these have "real time" example windows that change whenever an option is updated.
- Improved icon editor - supports up to 256 colors, giant icons (larger than the screen) with scroll bars, custom zooming controls, and multi-sized square and circular brushes. Also a new "pick" option is available for easier color control.
- Built-in print screen ability (includes support for color printers).
- Enhanced text window definition system which provides finer control over the placement of text windows, cursor handling and much more.
- New "kill mouse fields" system allows you to remove mouse fields from inside (or outside) of a particular rectangle.
- Improved color picker system.
- The pixel command (now known as the point command), allows for freehand "painting" of points which gives a paintbrush look and feel.
- New text placement system lets you place text on the screen in any orientation - vertical, horizontal, upside-down, etc.
- Transparent bitmapped icons are now possible.
- Ability to load photos (JPEG) and sounds (WAVE) files.
- Improved text variable query interface.
- Mouse field objects can now have hotkeys.
- Simplified button and mouse field creation process.
- Ability to shell to DOS.
- Looping sounds (edit the sound commands in the object lister).

All of these additions and improvements complement the redesign of the RIPscript language (see July, 1995 issue of ***Boardwatch*** for a full review of RIPscript). As stated earlier, there are so many improvements that it is hardly fair to call this a new version. It is really a whole new program.

RIPweb

The newest addition to the Telegrafix family is called RIPweb. This allows one to dial into a BBS running RIPweb with RIPterm and to access the World Wide Web and HTML pages without the need for a SLIP or PPP connection or a separate Web browser.

Harri Talvitie, President of X-Telnet, OG of Espo, Finland is the chief programmer and driving force behind RIPweb.

"RIPweb is actually a very sophisticated translator. It runs on a host computer which is connected to the Internet. The end user makes a dial-up modem connection to the host providing access to the RIPweb software. RIPweb sends RIPscript 2.0 commands to the dial-up user and HTTP requests to Web servers located on the Internet. RIPweb receives HTML documents from the Internet and translates them into a visual presentation using the RIPscript 2.0 language," said Talvitie.

He adds, "RIPweb can create all the graphic elements needed to give the impression of a graphic Web browser by using the features found in RIPscript 2.0. From the user perspective, RIPweb looks and feels like a Windows-based Web browser such as Mosaic or Netscape. RIPweb generates and sends RIPscript 2.0 codes to a RIPscript terminal emulator. These RIPscript 2.0 codes produce window frames, buttons, scroll bars and the actual graphic representation of the document content on the client display."

RIPweb supports HTML 2.0 and many features of HTML 3.0 such as tables and background images. There is also support for text entry fields, command buttons, check boxes and multiple-selection menus. Image formats such as GIF, JPEG, BMP, XBM and PNG are supported. There is also built-in code for GIF-to-JPEG conversion.

"Because the user does not need a SLIP or PPP connection, RIPweb tears down the barriers that seperate the average person from the Internet. It eliminates the need for a user to have any technical knowledge of the Internet or the World Wide Web," said Pat Clawson.

One of the best features is an automatic image conversion. According to Talvitie, "RIPweb compresses many Web images on-the-fly. The user can specify the compression ratio for the conversions. In some cases it is possible to reduce the image file sizes and thus the transmission times by 90%."

Jeff Reeder gave me a demonstration of this new technology. I was impressed, however this was a controlled environment with no other users accessing the system at the same time. Still, the system was very responsive and did provide all of the functionality described above. It also appears to be a quite stable environment.

"RIPweb basically runs on a Linux machine that is connected to the Internet. The connection could be via a T-1, 56k, SLIP, ISDN or anyway that you can hook to the Internet for your server. Then you just add some modems on the system or some null modem connections to your BBS system so you can connect to the UNIX server. You can have what is frequently called an 'out-link system' so with the click of a button you are on the Web without ever leaving your BBS, from the user's prespective," said Reeder.

RIPweb is currently being tested and no release date has been set. However, Pat Clawson says it will definitely "ship this year." The current version runs under Linux. BSD and Unix versions are planned. Additionally, "a single-tasking MS-DOS version, a MajorBBS module version and 16- and 32-bit Windows versions are also scheduled for release," notes Talvitie.

"The system actually consists of two programs. One is the central server which provides RIPweb services for the entire Unix machine. There is also an access program or RIPweb client which links the RIP system to the server itself.

"What we are trying to do is combine the best of two worlds — the flexibility of the hypertext language with the display presentation capabilities of RIP without the overhead that frequently accompanies a program like Acrobat," said Reeder. ◆

CONTACTS:

RIP
TeleGrafix Communications, Inc. 16458 Bolsa Chica, #15
Huntington Beach, CA 92649
Tel: **(714) 379-2131**
Fax: **(714) 379-2132**
BBS: **(714) 379-2133**

COST:
RIPterm: **$29.95** for the full professional version
RIPscript: **$200**

ResNova Software
5011 Argosy Drive, Suite 13, Huntington Beach, CA 92649.
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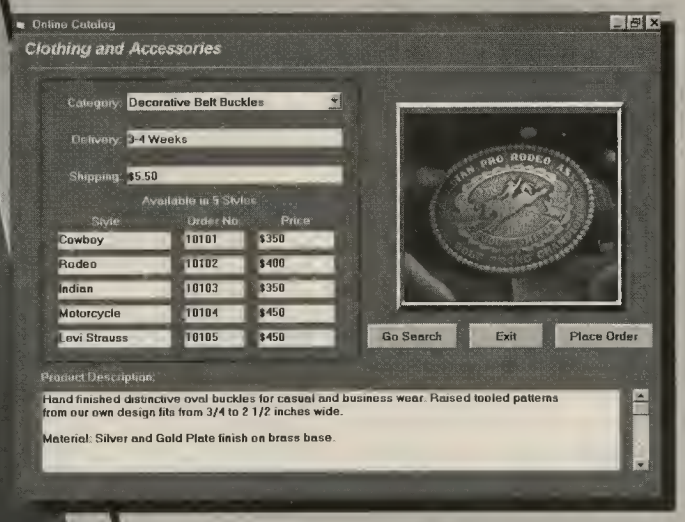
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WINDOWS 95 - CONNECTED

by Jack Rickard

The August 24th release of the Windows 95 upgrade to Microsoft's Windows platform was heralded by an extraordinary degree of press hyperbole, a **$200 million** marketing program from Microsoft, and fear, consternation and uncertainty throughout the personal computer industry. Bill Gates looked silly in front of television cameras noting that there was "too much in there" to really describe.

But after a couple of weeks of playing with the released version, we think he may be onto something. After several years of desperately needing a new operating system for personal computers, we do indeed have one. And it has so much inside it that it is indeed impossible to describe totally via any communications medium - including its own documentation apparently. We found it both frustrating and fascinating - and it probably qualifies as the best computer game currently available. Doom holds nothing on Windows95.

There are of course both strong and weak areas in this new operating system release. From our point of view, the strongest is that this release finally incorporates communications into the operating system itself in a way never before attempted - competently, usefully, flexibly, and nearly enough totally. We cheered the inclusion of the Transmission Control Protocal/Internet Protocols (TCP/IP) in Windows95. But that just scratches the surface. We were astounded at the communications capabilities, at all levels, included in this OS and further a bit surprised at how open they are. It works with nearly everything. Much of the press coverage has noted the connection to the Internet via the Microsoft Network - MSN. But actually all the tools are in Win95 to connect to any Internet Service Provider. You don't HAVE to use MSN at all.

The new interface is capable and visually pleasing. But it represents the heart of the learning curve, and so we approach it with the usual mixed feelings. Once you become accustomed to doing things a certain way, the reflexes harden and any change causes a certain degree of frustration and fumbling around. And frankly, to configure ANYTHING in Windows95 is frustrating. The configuration is scattered across three, four, five, or even more completely different locations. The settings are hopelessly interrelated. And what you see on screen changes dramatically depending on what you set before, what else you have installed, what you did in the initial installation, etc.

Further Microsoft has embarked on a serious campaign to make everything easier by replacing technical jargon that describes functions with bland, vague sounding terms that describe nothing. Since you still DO have to configure a lot of technical elements, this is basically relearning a new technical language that is profoundly ill suited to its task. The online help too often indicates things that simply aren't true on your machine and error messages are laughably vague. The 95-page pamphlet accompanying the standard release is nominally pathetic and should spawn a renaissance in book publishing. Even if you spring **$69** for the ***Microsoft Windows95 Resource*** book, only slightly less than the **$89** charged for the OS itself, you will treat yourself to one of the most confusing, poorly written technical manuals available for a fee. After browsing through a round half-dozen of the inevitable new Windows95 books, the best we can recommend is ***Mastering Windows 95 - The Windows 95 Bible***, written by Robert Cowart and published by Sybex (**$29.95** - ISBN 0-7821-1413-X. Sybex Inc., 2021 Challenger Drive, Alameda, CA 94501; **(800)227-2346**). It doesn't have everything we would like to see, but it does have most of it, and it is very well organized and written.

And finally on the negative side, Windows95 is spritely at some tasks, but generally it will make even a fast 486 look a bit sluggish. Reports of it requiring a large amount of memory and disk space are unfortunately true. If you can't pony up for the high-octane iron, Windows95 isn't going to make you happy.

The good news is that Windows95 will do almost anything you want it to. The bad news is that you can spend a long time and a lot of effort figuring out how to get it to do it. And then IT can take awhile on a slow machine to actually get it done.

Microsoft has taken quite a beating in the press and the world in general on their poor business practices and attempts to "own" the entire world through their operating system. The Microsoft Network has caused terrible fear among the larger commercial online services. It would appear that in the first weeks after the release of Windows95, the Microsoft Network has already become essentially unusable from the load of new callers. UUNET, who provides the national network and Internet connectivity for MSN, raised the white flag almost before it was turned on and assured everyone that it wasn't UUNET's fault and that the Microsoft back-end was to blame. The Microsoft servers consist of a network of some 300 quad-processor Pentium's from Compaq running Windows NT Server to distribute the load. Either the load was larger than expected, or the PC array doesn't quite live up to expectations. There are some serious delays getting on the system.

But we do not find this whole theory of Microsoft's mean-spirited ways reflected in Windows95 code. It is actually VERY open, very capable, and very receptive to alternative ways of making connections to almost anything anywhere. On the networking side, it includes excellent networking to Microsoft Networks and WindowsNT servers, but actually JUST AS GOOD connectivity to Novell networks, with a 32-bit client for Novell networks that we think works better than Novell's in some interesting ways. The TCP/IP sports a new WINSOCK.DLL TCP/IP stack that is dramatically faster than what we are accustomed to using with Trumpet Winsock, and the basic pile of incredibly confusing shims, Clarkson packet drivers, etc. that we had cobbled together to get Windows 3.1 connected both to a Novell LAN and TCP/IP is ever so gratefully a thing of the past. Windows95 does networking. It can be a little bit of a challenge to configure for some installations, precisely because of the enormous flexibility and power in the networking side of this operating system.

The new 32-bit Windows Sockets Version 1.1 Dynamic Link Library (WINSOCK.DLL) is the heart of this new TCP/IP function. It works well with all third-party apps we tested and is noticeably smoother and faster than previous WINSOCKs. There are some "packages" out there, including the CompuServe/Spry package, that include their own proprietary WINSOCK.DLL, which rather obviates the concept of having a standard. If the package installs its own 16-bit WINSOCK, it can not only lead to some conflicts, but represents an enormous leap backwards in performance.

And while Microsoft provides connectivity for electronic mail and the Internet, including a capable new web browser termed **Internet Explorer**, we were amazed to find how flexible and open this system is to connecting to ANY Internet service anywhere. It performs VERY well, in some very surprising areas. We not only connected via a dial-up PPP to a plain vanilla Internet service provider, but were stunned to learn that we could configure the new Microsoft e-mail program, titled **Microsoft Exchange**, to do **P**ost **O**ffice **P**rotocol 3 (POP3) mail via any service provider, and do it better than any e-mail package we've found.

In truth, a good bit of this is not directly attributable to Windows95. There is a companion program titled **Microsoft Plus for Windows95** widely available at about **$39.95**. It includes some very fancy "master themes" that include wallpaper, sounds, etc. that are indeed interesting, a system agent to routinely run housekeeping programs on a schedule, an update to the disk compression utilities called **DriveSpace3**, and some visual enhancements that allow your task bars to slide smoothly away, etc. But it also includes a Dialup Network Server that allows your PC to answer calls from the road and connect your laptop. And most interestingly from our point of view is **Internet Plus.** This includes the **Internet Explorer**, a web browser that incorporates the best of Netscape's capabilities along with additional functions such as creating a shortcut on your desktop to a specific web location. It also includes an Internet driver for **Microsoft Exchange**. This allows you to use the Microsoft Exchange e-mail program with any POP3 mailer through any Internet service provider. Finally, it includes a **Dial-Up Scripting Tool** that you will need to completely automate your connection in the event your Internet Service Provider does not support the automated logon included in Windows95. The **Plus** option is very necessary for Internauts not inclined to use the Microsoft Network. Since it requires a 486 or Pentium, we would expect at least part of the reason it was not included in the operating system is Microsoft's desire to at least claim that Windows 95 will work with a 386 - a dubious claim at best.

Between the e-mail capabilities of Microsoft Exchange, and the web browsing capabilities of Internet Explorer, coupled with the basic TCP/IP connection, Microsoft has provided essentially all the basics you need to work usefully on the Internet - in the operating system. Within a week, Microsoft Exchange has replaced our favorite free desktop e-mail package, E-Mail Connection (`http://www.connectsoft.com`). And while we remain terribly enamored of **Netscape** as a web browser, Internet Explorer does provide basic web surfing capabilities. In the past, communications was the least functional element of any Microsoft operating system. In Windows95, the TCP/IP, e-mail, and web browser included appears to lead the field.

Plaudits and praise in general terms are encouraging and I'm sure - fun to read. But in this article, we are going to walk you through the installation, configuration, and operation of a dialup, 28.8 kbps PPP link to any Internet service provider. And we're going to devote quite a bit of space to configuring Microsoft Exchange to do electronic mail - complete with fonts, colors, bold text, and photos, over the Internet. Internet Service Providers, BBS operators, and others in the industry are going to have to explain this to their callers, and getting it correctly configured is, unfortunately, non-trivial.

ASSUMPTIONS:

As mentioned, we have found Windows95 very capable at networking. Windows95 can also act as a PPP SERVER. And we'll probably do a number of articles on using it usefully on the LAN in future issues of ***Boardwatch***. But this article assumes a single isolated computer, at a single site, that we will connect using a 28.8 kbps modem and an ordinary Plain Old Telephone System (POTS) analog telephone line. We assume that Windows95 itself and Windows PLUS have installed on the PC. And the connection will be to an Internet Service Provider offering dial-up Point-to-Point-Protocol (PPP) connections. Windows95 WILL do Serial Line Internet Protocol (SLIP) and Compressed Serial Line Internet Protocol (CSLIP) connections as well. We will probably show a SLIP configuration in a future issue. But the objective here is to have a fully functional PPP dial-up connection to do web browsing, and configure Microsoft Exchange to do Post Office Protocol (POP3) Internet mail. And we want to do it from an

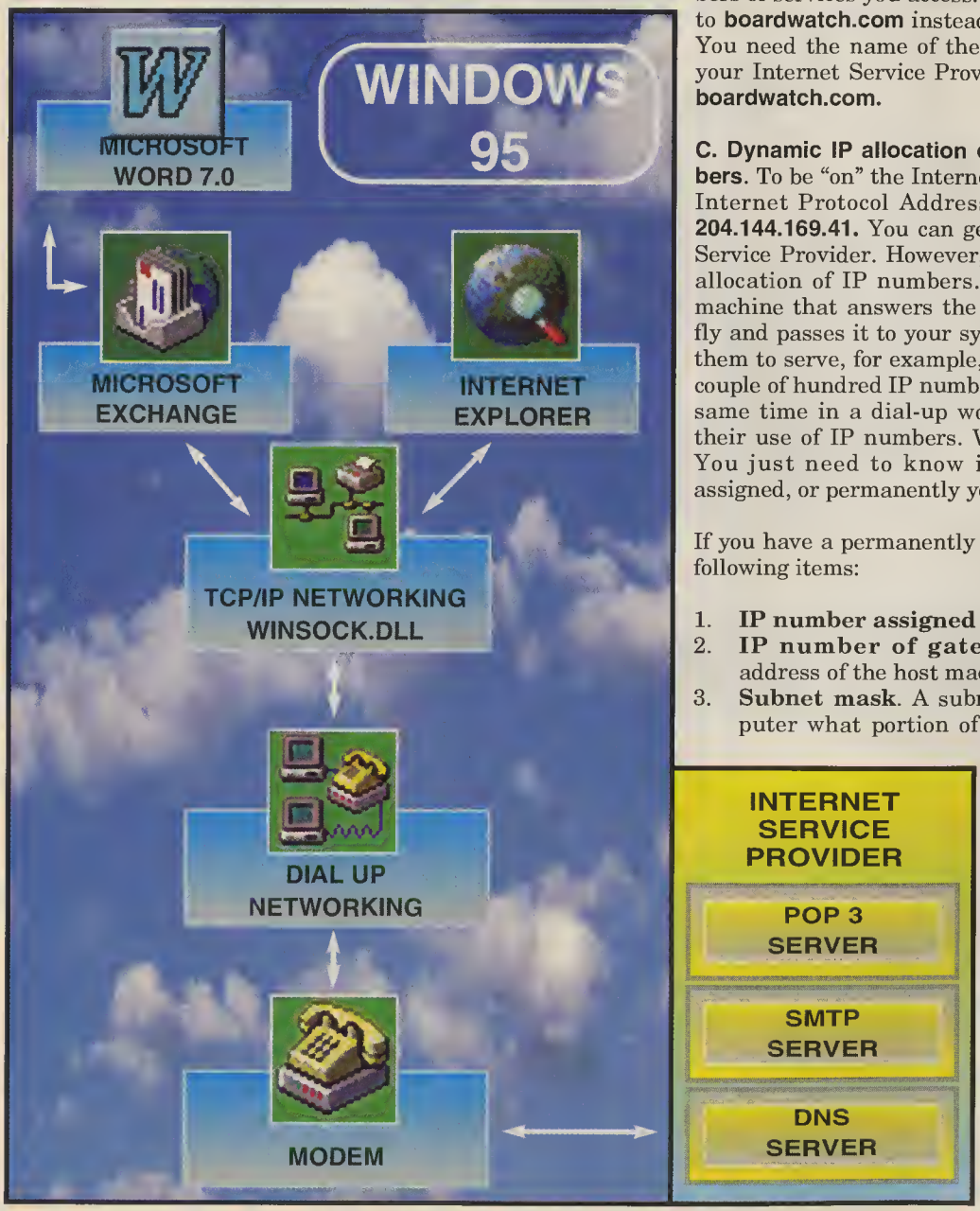
isolated single PC or laptop without relying on a LAN at the office or other group grope to get us there.

SOFTWARE:

We do assume you have Windows95 of course. We like the CD-ROM version as not only installation, but even configuration changes require frequent trips to the distribution disks to perform. Bill Gates has finally devised the ultimate anti-piracy package for software. Without the CD-ROM, you are effectively disenfranchised from your machine. And it is such a win over keeping track of 27 floppies that it seems painless. It is widely available at **$89**. We also assume you have the Windows95 Plus bonus package. This is a second CD-ROM priced at about **$39** that includes the Internet Explorer and a script processor you will most likely need to make the connection.

HARDWARE:

We assume installation on an Intel PC meeting the Windows95 minimums and a modem. The 28.8 kbps models are no longer expensive and for web exploring, almost a minimum. The World Wide Web at 14.4 kbps is not a pretty thing to contemplate. But it can be done. For e-mail, the 14.4 kbps models work fine.



SERVICES:

1. Standard analog telephone line service.

2. A dialup PPP account with an Internet Service Provider and Post Office Protocol (POP3) e-mail service - virtually universal with a PPP account.

You will need the following information from your Internet Service Provider:

PPP CONNECTION

A. Your login name and password for the PPP account.

B. Domain Name Server. Your computer must query the domain name service database to look up the actual IP numbers of services you access. This is what allows you to connect to **boardwatch.com** instead of having to know **204.144.169.1**. You need the name of the domain name server provided by your Internet Service Provider. Ours, for example, is simply **boardwatch.com.**

C. Dynamic IP allocation or permanently assigned IP numbers. To be "on" the Internet, however briefly, you do need an Internet Protocol Address. This is a numeric of the form **204.144.169.41.** You can get this number from your Internet Service Provider. However, most ISPs have gone to dynamic allocation of IP numbers. That is, each time you call, the machine that answers the telephone assigns you one on the fly and passes it to your system over the modem. This allows them to serve, for example, a thousand customers with just a couple of hundred IP numbers. Since not everyone is on at the same time in a dial-up world, it increases the efficiency of their use of IP numbers. Windows95 handles it either way. You just need to know if IP numbers are dynamically assigned, or permanently yours.

If you have a permanently assigned IP number, you need the following items:

1. **IP number assigned to your machine.**
2. **IP number of gateway machine.** This is the IP address of the host machine you will route packets to.
3. **Subnet mask.** A subnet mask points out to your computer what portion of the full IP number is pertinent. For dialup accounts, this is almost always **255.255.255.0. But ask anyway.**

POP3

You will also need some basic information about your e-mail account in order to do Post Office Protocol Mail. This allows you to send and receive e-mail world wide with your Internet Service Provider acting as a receiving agent when you are not actually connected.

D. Your e-mail address. This is normally provided by your

Internet Service Provider - something along the lines of **your.name@netcom.com**. This is the address your correspondents use to address mail to you from anywhere in the world.

E. The SMTP Server. When you SEND electronic mail, it is transmitted over your PPP link to a Simple Mail Transport Protocol (SMTP) server. Again, this is just the name of a machine maintained by your service provider. We just call ours **mail.boardwatch.com**.

F. The POP3 Server Machine. This is the name of the machine at your Internet Service Provider that performs the Post Office Protocol (POP3) mail service. It may be the same name as the SMTP server or a different one. Ours is again **mail.boardwatch.com.**

G. POP3 Login name and password. This could be the SAME as your PPP login name and password. Often it is DIFFERENT from your PPP login name and password. This allows you to make a single common PPP connection to your Internet Service Provider, and still allow several different people on your computer to have e-mail accounts on the provider. By providing a different POP3 login and password, they would only get the mail addressed to THEM, even though they were using a common dialup account.

THE BASIC PPP CONNECTION

In order to setup a basic Point to Point Protocol dialup connection to an Internet Service Provider, there are several things we must configure in Windows 95.

1. Check Windows 95 setup to make sure you have installed the necessary components
2. Install/configure the Modem
3. Set up Network Parameters with a Client, Adapter, and Protocol
4. Set up the Dial-Up Connection
5. Test and possibly script your connection to automate the process

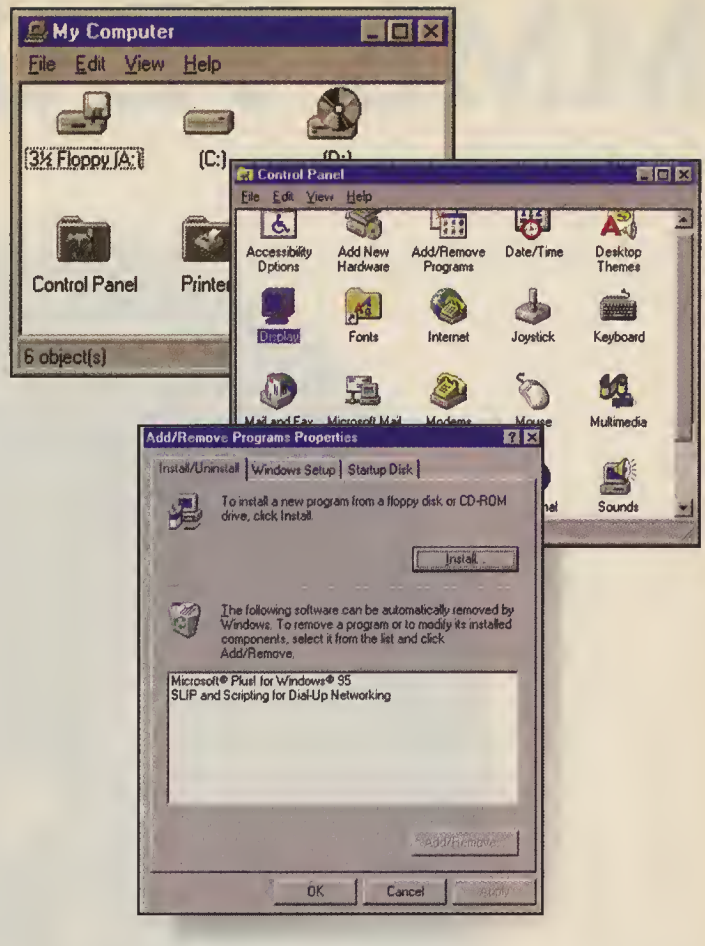
WINDOWS 95 SETUP

We do assume you have installed a working version of Windows 95 on your computer AND installed the Microsoft PLUS for Windows95 option disk. But there are many options in the installation, and there are a couple of things we are going to need to accomplish this connection. Fortunately, it is very easy to go back and add things to your Win95 installation.

1. Put the Windows95 CD-ROM in your CD-ROM drive
2. Click on MY COMPUTER
3. Click on CONTROL PANEL
4. Click on ADD/REMOVE PROGRAMS

The tab listed here is INSTALL/UNINSTALL. Check to make sure that in the list on this screen you list MICROSOFT PLUS FOR WINDOWS 95 and SLIP AND SCRIPTING FOR DIALUP NETWORKING. If they are not present, reinstall the Microsoft PLUS CD-ROM and select all the available options.

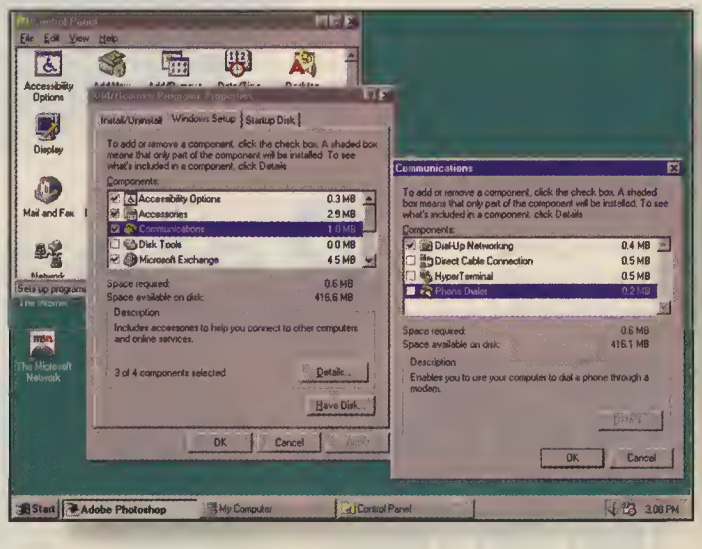
Once you are sure Microsoft PLUS is installed, click on the WINDOWS SETUP tab.



This presents a series of software categories such as ACCESSORIES, MICROSOFT NETWORK, etc. You can highlight any of these categories and examine what specific programs within that category are marked with a checkbox for installation using the DETAILS button. We are interested in just a couple of these.

The first is COMMUNICATIONS. This category lists:

DIAL-UP NETWORKING
DIRECT CABLE CONNECTION
HYPERTERMINAL
PHONE DIALER



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WEB BBS

TEAMate GUI Clients include WWW Browser

TEAMate software now contains an integral WWW browser. This means that you and your users can now mix HTML and other data within your TEAMate Bulletin Board. Forums, download libraries, upload areas, etc., can be in structured BBS format and HTML can be used where appropriate. You can mix and match as desired and even include HTML documents as email or messages. The TEAMate client automatically determines whether HTML data is present and switches to HTML mode if required. From within an HTML document you may also "jump" into BBS mode. This means that if your hypertext link goes somewhere in the BBS other than to an HTML document, the client will switch automatically to display the information, the order form, the threaded list of messages in the discussion, etc., in BBS mode.

Your Server Doesn't Need to be "On the Internet" to use HTML

TEAMate GUI clients for Windows 3.1, Mac and OS/2 support both serial and TCP/IP access so your users can run directly connected to the Internet or with just a normal modem connection.

Since the HTML viewer built into the TEAMate client does not require a TCP/IP connection, you and your users can build HTML documents on your server and view them with the TEAMate GUI client. No Internet access is required to use HTML. Normal dialup directly to your server is all you need.

Worldwide WEB Sites

Any HTML document within your system can "point" to a Web site outside your system and the user will be connected to the remote site. To use this feature your server must have a TCP/IP link to the Internet. The user may be running an async connection or TCP/IP.

Full Text Indexing of HTML

One of the very powerful features of TEAMate is its built-in capability of fully indexing all of the items in the system. This feature is carried over with the HTML documents so that the HTML is fully indexed on content. Your users can do a simple full text search, pull up a list of HTML documents and then follow the links to the information they need. You can add new HTML pages to your system easily and even categorize them using the TEAMate topics, so that your users can find what they need, fast!

Internet Access INTO Your System

If your system is "on the Internet" you can run the TEAMate WWW server module so that anyone can connect to your bulletin board via any standard WWW browser. For WWW browsers TEAMate supports user authentication using the built-in TEAMate access controls plus automatic generation of HTML for those areas of your server that only contain ASCII and graphics. A standard feature allows any WWW browser user to post items to the bulletin board after they "login" via the WWW browser using their TEAMate user name and password. All TEAMate GUI clients can be used on the Internet to directly access your server.

FTP in TEAMate Client

The Internet File Transfer Protocol is built into the TEAMate GUI client. Users can connect to any remote FTP site that you permit and you can "script" the login procedures using the built-in scripting language. Files are transferred directly to the user's PC from the remote FTP site.

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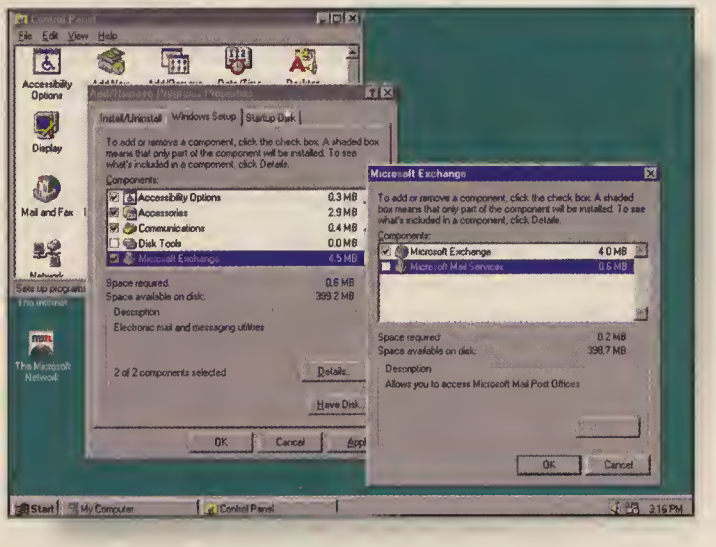
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Install all you like, but the one we have to have here is DIAL-UP NETWORKING.

Another category is MICROSOFT EXCHANGE. This category only has two possibilities, MICROSOFT EXCHANGE and MICROSOFT MAIL SERVICES. We need MICROSOFT EXCHANGE.

From there you can pretty much follow the Wizard using the NEXT key to install these additional items. If they were already checked, you have all you need.



IN THE BEGINNING - INSTALLING YOUR MODEM

For many years, the bane of PC communications has been the act of installing and configuring the modem itself. This is where start bits, stop bits, number of data bits, and worst of all, modem initialization strings, have made it nigh onto impossible for a large percentage of our population to ever go online. It is actually too techie even for technoids. Over and over and over again, we have gone through everything in a system or process, to one more time once again over learn that modem initialization strings are the heart of all online communications problems. It is almost a joke here. After everything else has been tried, someone will pipe up with the party line - "how about modem initialization strings." And about 80% of the time, the joke backfires and it is INDEED once again the modem initialization string that has us chasing our tail.

Microsoft has more or less ended it in Windows95. I'm not sure how they did it other than brute force. But for now, setting up a modem is just no longer an issue.

The easiest way to install a modem, is to turn the computer off. Connect the serial port to the modem with the serial cable and turn the modem on. Then fire up the computer.

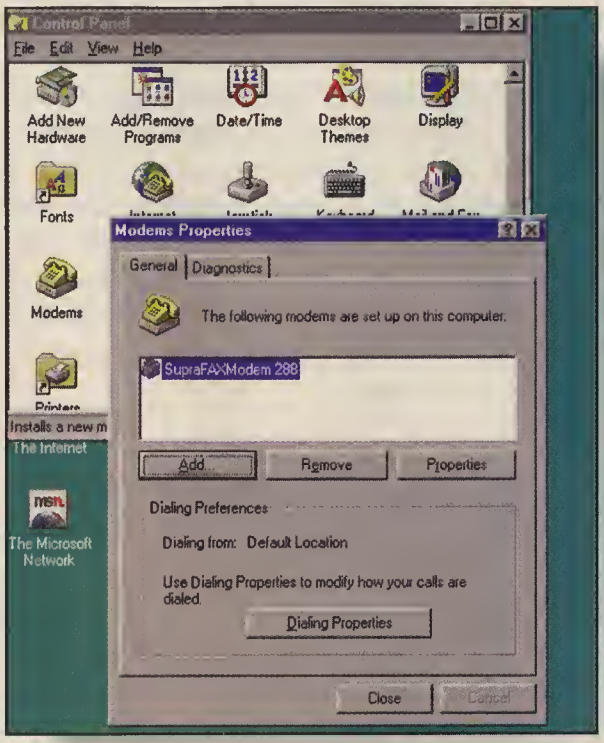
1. Go to MY COMPUTER and click on the CONTROL PANEL.
2. Click on ADD NEW HARDWARE.

Windows95 will walk you through the process with an Installation wizard. We tested a dozen different brands and models, and it correctly configured them 100% of the time if we did nothing but click on NEXT at every opportunity and accepted the defaults. You DO need the Windows95 upgrade CD-ROM in the CD-ROM drive when you do this as the wizard accesses the CD-ROM to get modem configurations.

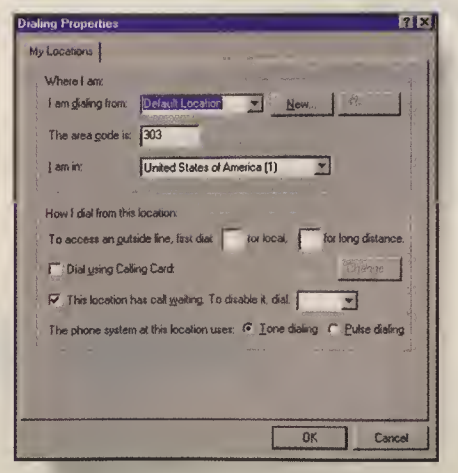
There is another way to add a modem.

1. Go to MY COMPUTER and click on the CONTROL PANEL.
2. Click on MODEMS icon.
3. Click on the ADD button.

There are a couple of communications parameters we like to set here under the MODEMS icon. When you open it up, it will list all the modems installed, whether they are currently connected or not. Highlight the modem you are working with now and click on DIALING PROPERTIES screen. This is a

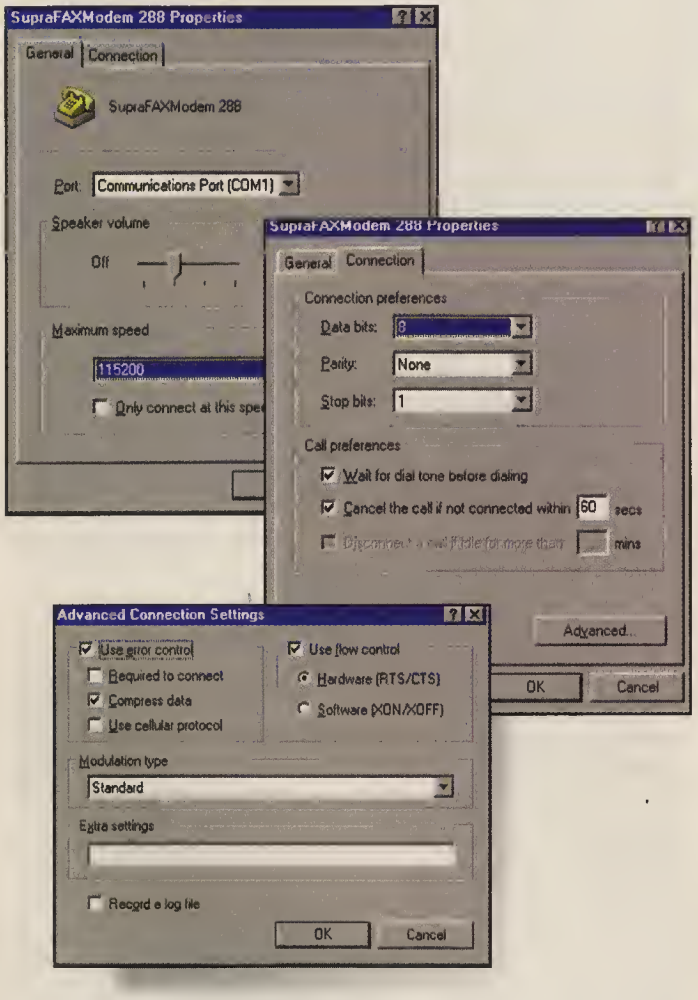


pretty understandable configuration screen allowing you to set up for a number of dialing options related to your area code, any digit that has to be dialed to get an outside line for a local call, outside line for a long distance call, and even use a calling card to dial charged calls. You can setup several different profiles for on the road, at home, at the office etc. This is quite well done in Windows95 and if you are a laptop road warrior, you'll find them necessary.



The other PROPERTIES button on the modem screen allows the setting of a number of more technical options. The default connection speed Windows95 usually puts in here is 57,600 bits-per-second (bps). This is actually NOT modem speed, but the speed of communications between the modem and your computer

via the serial cable and serial port in the PC itself. Virtually all V.34 28.8 kbps modems can communicate with the computer at 115,000 bps. IP packets are actually quite compressible and V.42 compression can in theory run up to 4 to 1. So if you have a solid 28.8 kbps connection, you could, in theory, be pumping data at up to 115 kbps. In practice, it is not at all unusual to exceed 57.6 kbps in bursts of text. So we set it to 115 kbps. There is also a check box to CONNECT ONLY AT THIS SPEED. We do not normally check this box - leave it clear. If your modem only talks at 57.6 kbps for example, the modem and PC will work the highest mutually agreeable communications speed if you don't insist that it connect at 115 kbps.



If you click the CONNECTION tab, you have several options.

1. DATA BITS set to 8
2. PARITY set to NONE
3. STOP BITS set to 1
4. WAIT FOR DIAL TONE BEFORE DIALING active.
5. CANCEL IF CALL NOT CONNECTED WITHIN 60 SECONDS active.
6. Click ADVANCED button
7. USE ERROR CONTROL active
8. COMPRESS DATA active.
9. USE FLOW CONTROL active
10. HARDWARE (CTS/RTS) active
11. All other options cleared.

This is usually how it will be set up by Windows95, but you might want to go through these checks.

CONFIGURING THE NETWORK

The next function we need to perform is to set up our network functions. From the desktop, click on MY COMPUTER, then CONTROL PANEL, and within control panel, click on NETWORK.

This brings up a configuration box with three tabbed items:

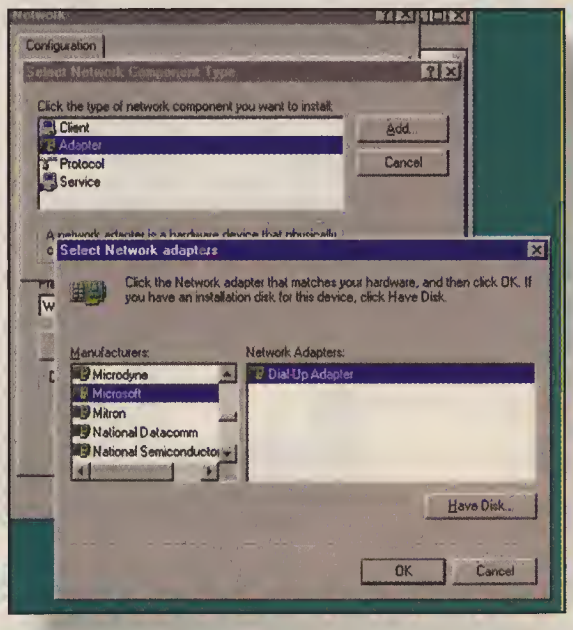
CONFIGURATION
IDENTIFICATION
ACCESS CONTROL

The ACCESS CONTROL tab is used to establish what resources we share under a Microsoft Network. We won't have one so ignore it.

IDENTIFICATION sports three fields, one for COMPUTER NAME, WORKGROUP, and COMPUTER DESCRIPTION. You can enter anything you like, they seem to be required, but again are for logging on to Novell or Microsoft networks.

The main tab we have to deal with is CONFIGURATION. We want to add a couple of items to this - a dial-up adapter and the TCP/IP protocol.

1. Click ADD.
2. Double click on ADAPTER.
3. Select MICROSOFT from the scroll list in left box.
4. DIAL-UP ADAPTER should be highlighted in right hand box.
5. Click OK.

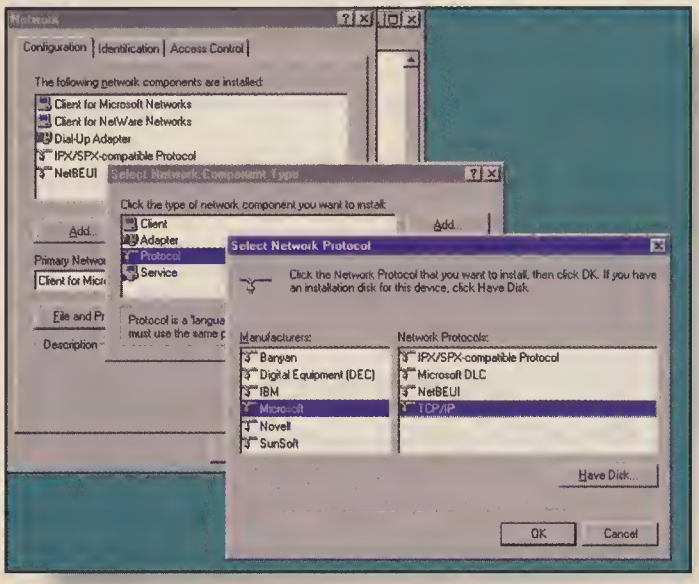


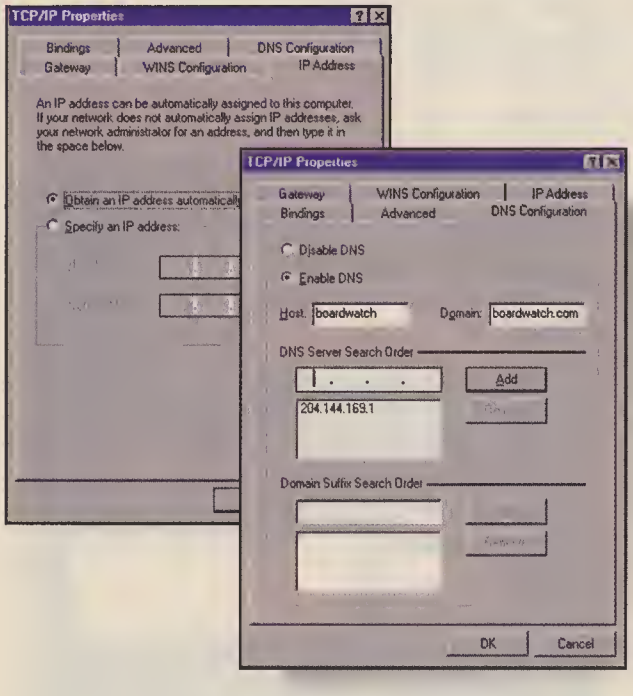
This should add several items to our CONFIGURATION list. At a minimum, we want the DIAL-UP ADAPTER. You may also get clients for Microsoft Networks, Netware Networks, NetBEUI, and IPX/SPX protocols. We DO need a client of some sort to automate our logon, but we are not going to cover Novell or Microsoft Networks here.

We also need to add a protocol. In this case TCP/IP.

1. Click ADD.
2. Select and double click PROTOCOL from the list of options.

3. Select MICROSOFT from left box.
4. Select TCP/IP from right box.
5. Click OK.





This should bring you back to the CONFIGURATION window, with TCP/IP now appearing in the box. Highlight TCP/IP and click on the PROPERTIES button. We will see six tabbed configuration pages here. We are interested in three of them.

1. IP ADDRESS. If we receive a new IP address automatically at logon, click on OBTAIN AN IP ADDRESS AUTOMATICALLY. If not, click on SPECIFY AN IP ADDRESS. Enter your assigned IP address and a subnet mask - usually **255.255.255.0**.

2. DNS CONFIGURATION. This screen asks for a HOST, a DOMAIN, and then a DNS SERVER SEARCH ORDER. None too confusing here. First, click ENABLE DNS RESOLUTION.

HOST is the name of your machine. You are basically associating a name with the IP number of your own machine. Let's call ours LAPTOP.

DOMAIN is the fully qualified domain name of the system you are dialing into. Ours is BOARDWATCH.COM. Again, from your service provider. Between these two fields, we have basically created a new domain name, LAPTOP .BOARDWATCH.COM which is associated with the IP number we receive at logon.

DNS SERVER SEARCH ORDER indicates a series of IP numbers of machines that contain portions of the domain name system database. You need at least one. Your Internet Service Provider will give you one, or may provide you with several. Add them to this list. Whenever any program on your system tries to contact another system, **http://www.boardwatch.com** for example, it must first lookup the IP number of that machine. It sends out a request to a domain name server with the name, and the domain name server replies with the appropriate IP number to use. It's a bit like an automated 411 service for the Internet. In any event, get the IP number of a domain name server from your Internet Service Provider and enter it here.

3. GATEWAY. The gateway address is the address of the computer we will route all outbound packets to. If we automatically obtain an IP number at logon, we also use that as the default gateway and this screen isn't necessary at all. If we have a permanently assigned IP number, we will also get a gateway IP number from our Internet service provider. Simply enter it and click ADD.

The other three screens aren't needed for a dialup PPP connection to the Internet.

CONFIGURING THE DIALUP CONNECTION

At this point, we've checked our Windows95 basic installation, installed a modem, and configured a TCP/IP network connection using a dial-up adapter. But we haven't really specified any details about the dial-up adapter. We will do this, and a LOT of the functions, particularly the TCP/IP protocol selections, will seem very redundant with our Networking setup. That's a bit by design. We need to have very similar, and in most cases matching selections here. This is because the networking configuration is a bit wider. It can use multiple adapters, LANS, other dial-up connections etc. and even use multiple protocols etc. In configuring the dial-up connection, we are specifying parameters for ONE of what could be many types of connections we might use as a network. The parameters we enter here are indeed very interrelated with the settings in the network area.

From the desktop, we start with MY COMPUTER again. But rather than selecting Control Panel, you should see a DIALUP NETWORKING icon. Click on it.

This should call up a small program group window with one icon in it - MAKE NEW CONNECTION. This is a setup wizard to create new dial-up connections. Note that we can have any number of these - one for each ISP or system we want to connect to. We might have one for a Microsoft Windows connection to our office computer, and a second one for our Internet Service Provider to do TCP/IP. Here, we are going to configure a single dial-up connection for TCP/IP to an Internet service provider.

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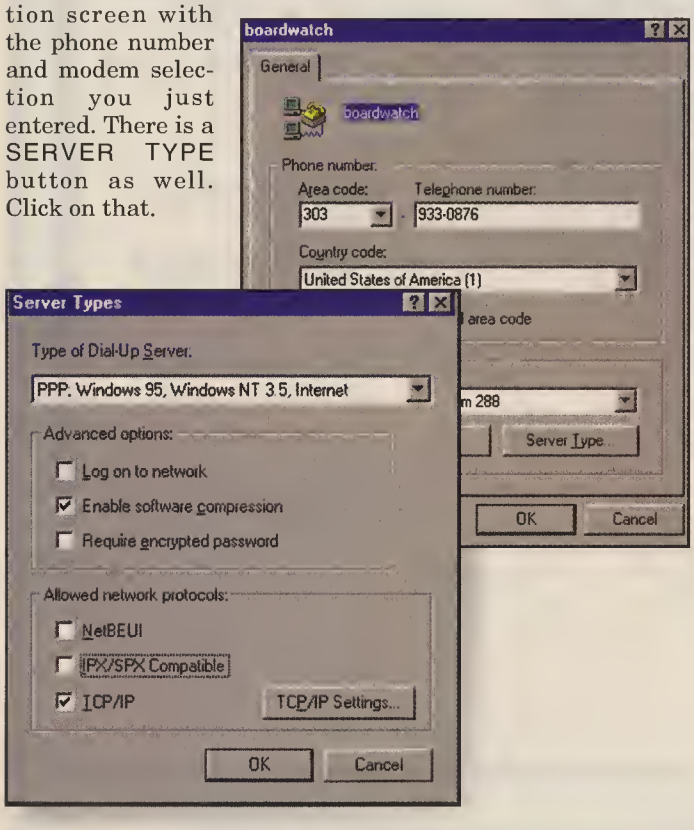
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Click on the MAKE NEW CONNECTION. It will call up the first screen of the configuration and you will be asked to enter a name for the computer you are dialing. Actually, this can be anything descriptive. It will be shown as text below the new icon created with this connection and the objective is to differentiate it from any others you might make. We entered BOARDWATCH since we are going to be dialing our PPP server at the office.

There is also a scrolling selection window to SELECT A MODEM. This window will list any modems you configured in the earlier modem configuration process. There is also a CONFIGURE button if you want to go to the modem configuration area, but it should be pretty well set up at this point. Click on NEXT.

This should bring up a fairly simple screen where you enter the area code, international country code (actually the country) and the telephone number of the system you will be dialing. There is a FINISH button when you complete this. And that's the end of the help you get from the "wizard." You're not quite done actually.

The wizard creates an icon in the DIALUP NETWORKING group with the name you gave it. There are some additional configuration elements however. Highlight the icon with a single click. Then go to the FILE area on the title bar for the group, and select PROPERTIES from that. This should display a configuration screen with the phone number and modem selection you just entered. There is a SERVER TYPE button as well. Click on that.

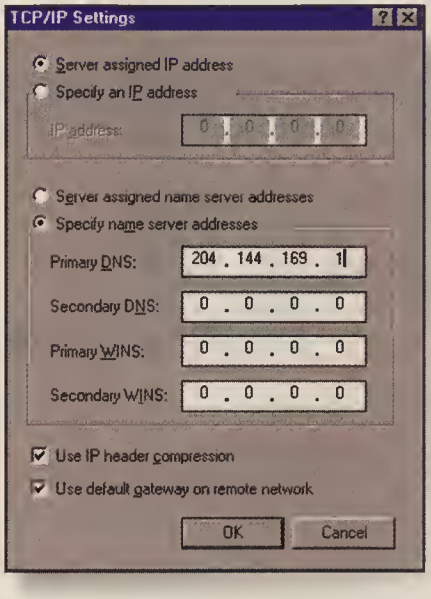


This leads to a SERVER TYPES screen. The first item is a scrolling pick list from which you must select. The item desired in this case is PPP: WINDOWS95, WINDOWS NT 3.5, INTERNET. This is the basic Point-to-Point-Protocol supported by most Internet Service Providers, and as noted, by Windows95 and Windows NT Version 3.5.

Under ADVANCED OPTIONS, you can select by checkbox LOGON TO NETWORK, ENABLE SOFTWARE COMPRESSION, and REQUIRE ENCRYPTED PASSWORD. We are going to clear the box next to LOGON TO NETWORK. We would check this if we were attempting to logon to a Microsoft Network or a Novell Network. Since we are doing a basic PPP, checking it would only slow things down a bit during logon, to no other ill effect. It does not relate to your PPP Logon. ENABLE SOFTWARE COMPRESSION we check to enable. This causes your computer to compress data before sending it IF the other system supports the same compression scheme. Hope springs eternal. And we normally clear REQUIRE ENCRYPTED PASSWORD. This provides another layer of security, but is not likely supported by your ISP.

Under ALLOWED NETWORK PROTOCOLS, we see NetBEUI, IPX/SPX COMPATIBLE, and TCP/IP listed. We will check ONLY the TCP/IP box.

Note that there is also a button labeled TCP/IP SETTINGS. Click on this button and call up the TCP/IP SETTINGS screen. This will look very redundant with the networking properties for TCP/IP and, in fact, we want to strive for some consistency here with what we entered in the Networking configuration properties for the TCP/IP protocol.



Again, the big question is do we have an assigned IP number from our ISP, or will it be automagically passed to us when we log on? Click the appropriate button and if the former, enter the assigned IP number. But here Microsoft throws us a ringer. We get the same option with regards to domain name server addresses. It is much rarer for ISP's to pass DNS server addresses at logon. Normally you would click on SPECIFY NAME SERVER ADDRESSES and then enter the same DNS server IP number in PRIMARY DNS as you did in the networking configuration properties for TCP/IP earlier.

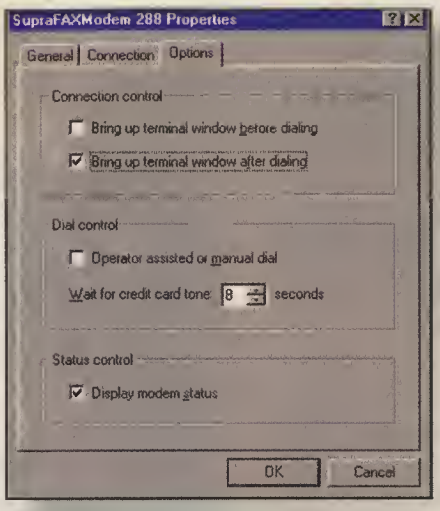
USE IP HEADER COMPRESSION. We normally check it to no ill effect in the hope springs eternal mode. Microsoft does support the RFC 1144 standard for compressing TCP/IP headers for low-speed serial links. IP header compression is quite common in PPP connections and does cut down the packet overhead somewhat. Most ISPs do support it.

USE DEFAULT GATEWAY ON REMOTE NETWORK? Again, if we normally get an assigned IP number at logon, you would

check this box. If we have a permanent IP number and actually entered a gateway IP number in the network section, you can leave this clear.

Now let's set up our terminal screen:

1. Click the OK button on the TCP/IP SETTINGS screen.
2. Click OK again on the SERVER TYPES screen.
3. Click CONFIGURE on the GENERAL screen.
4. Click OPTIONS.
5. Check box BRING UP TERMINAL WINDOW AFTER DIALING.
6. Click OK.



The terminal window after dialing causes a temporarily desirable thing to happen. Whenever we activate this dial-up connection, the modem will dial our service, establish carrier, and then bring up a terminal window allowing us to manually enter our logon name and password to logon to the service. Once we are logged on, we can press F7 to shut down this terminal, and then minimize our now working connection. This gets to be gruesomely manual. But it is workable. You could conceivably click on your Netscape Browser (the 32-bit version 1.2N or later) and it would call up this connection. The connection would automatically dial your ISP and call up the terminal window. You would manually logon, and then manually make this terminal go away. Then the connection shrinks and you are webulizing to your heart's content.

But all of this is a bit awkward and kludgy. We are going to use several strategies to MAKE IT ALL GO AWAY. We want to start Netscape or any other Internet application, and have it automatically kick off the dial-up connection which will automatically call our service, logon, and shrink itself, without any further human effort. In this way, when you need something on the network, the computer does all the work to dial it and make the connection.

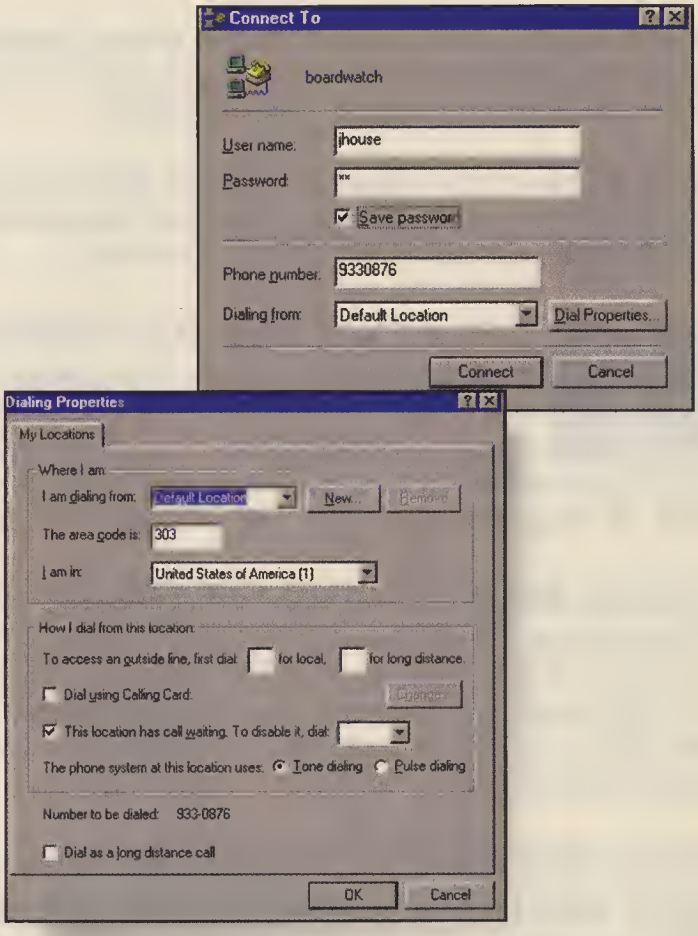
TESTING THE CONNECTION AND DEVELOPING A SCRIPT

We are ready to manually test our connection and see if we are making the trip with regards to a TCP/IP connection to the Internet. If we are, we are going to see what we can get away with in regards to automating the process of making that connection.

To kick off a connection, simply double click on the icon for that connection. This will bring up a CONNECT TO screen with several options on it.

The first is USER NAME and the second is PASSWORD. There is also a SAVE PASSWORD check box. Since we are going to logon manually, this again seems redundant. But in either of our automatic logon schemes, we need these. So enter the login name provided by your Internet Service Provider for your PPP account in USER NAME and the associated password in PASSWORD and DO check the SAVE PASSWORD box.

Note that this user name has NOTHING TO DO with any other user name or password you use in Windows95. It can be completely different from what you use to logon to your computer if you use a password to logon when you first start your computer.



There is also a PHONE NUMBER box that will display the number that will actually be dialed. You entered a number during the dialup connection configuration. But this can be modifed by your DIALING FROM profile. This indicator has an associated scroll box where you can pick where you are dialing from. And the associated DIALING PROPERTIES button calls up a whole screen where you can enter options for long distance dialing, prefixes to get an outside line, and even calling card options. You can create several of these. One for example, you might use when dialing from home. A second when dialing from hotels on the road. And a third if you wanted to dial from your office and had to dial 9 for an outside line, even on a local call. In this way, you can set up several profiles causing the dial to happen differently from each location.

And at the bottom of the CONNECT TO screen is a CONNECT button. Once you have all this filled out, and after the first

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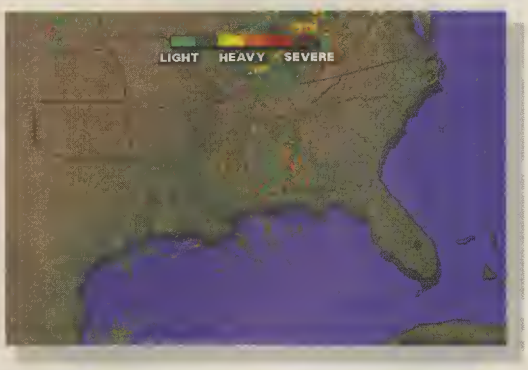
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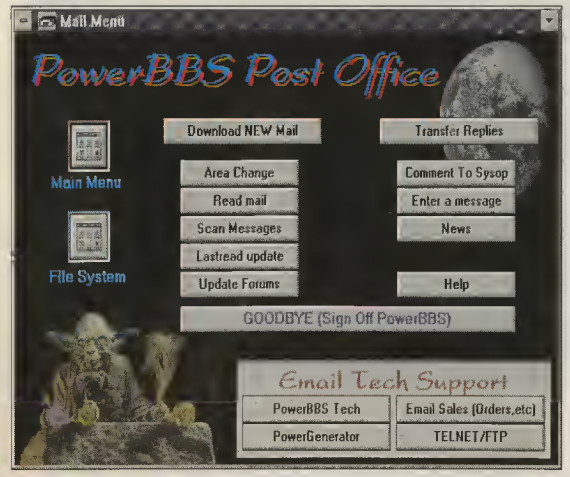
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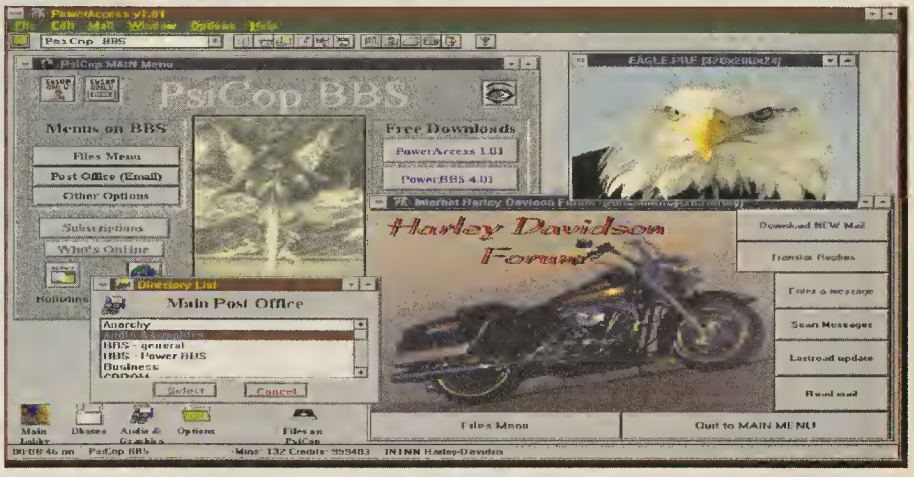
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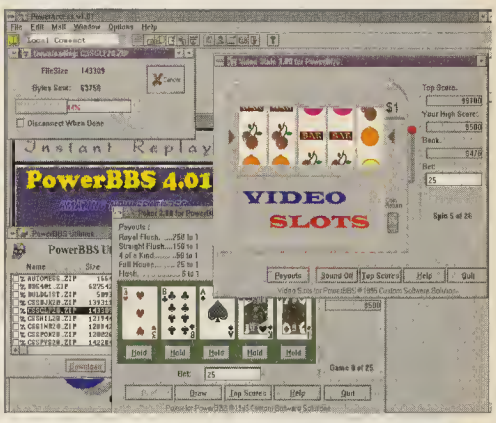
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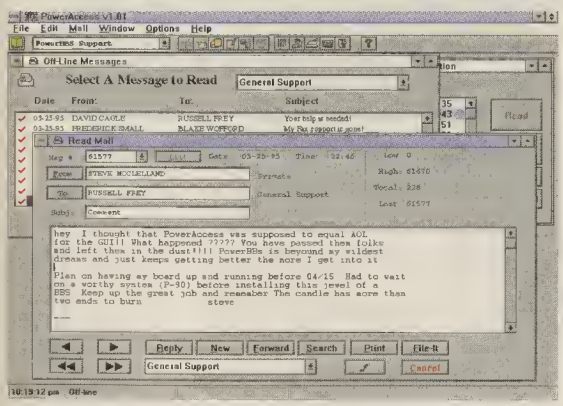




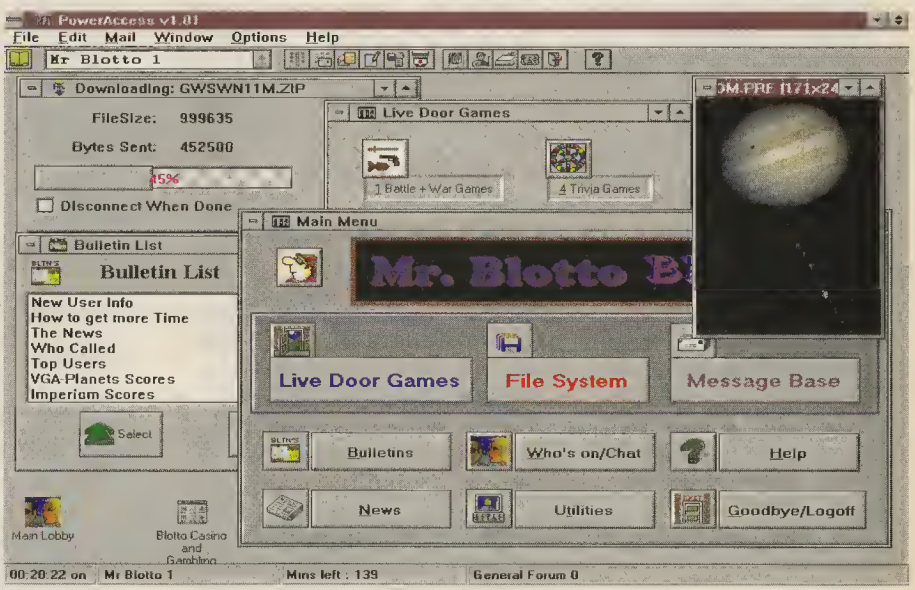


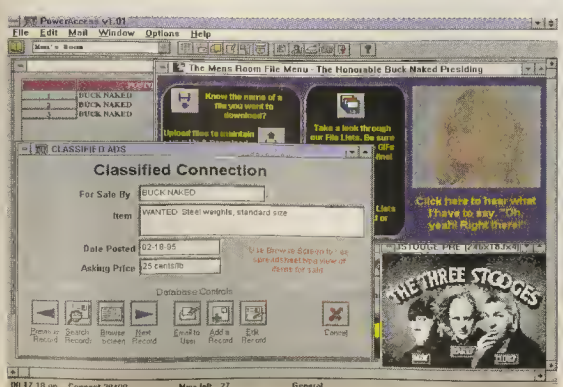
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time it will be more or less complete in the future except for desired changes, simply click on CONNECT.

The modem will dial your service provider. Once a connection is made, a small black terminal window will appear. You may need to press ENTER once to get the system to respond with a LOGON: prompt. Then manually enter your login name and password as prompted by the service. You may also have to select your protocol from a menu. Indicate PPP. You should be rewarded by a line or two of gibberish. This is actually what success looks like. Press F7 to make the terminal screen go away. You should briefly see a small advisory screen indicating that your logon name and password are being verified, followed by a small box indicating that you are connected and at what speed.

At this point, we think we have a connection. But let's do a couple of simple tests to see. Windows95 comes complete with some very basic programs that operate from the MS/DOS command line. Click on START on the task bar, and then PROGRAMS, and then MS/DOS Command Line. This should give you a small, rather dark box with the familiar C:> prompt. Several utility programs are available from the prompt.

PING
TRACERT
FTP
TELNET
NETSTAT
WINIPCFG

The most basic check is to enter PING and a domain name - of anyone. PING BOARDWATCH.COM would work. PING simply sends a message to BOARDWATCH.COM and Boardwatch would echo it back - a bit like the sonar ping from old grade B submarine movies. This will tell you that you have a connection to the Internet, can talk, and can be heard, and can receive replies. PING uses the Internet Control Message Protocol (ICMP).

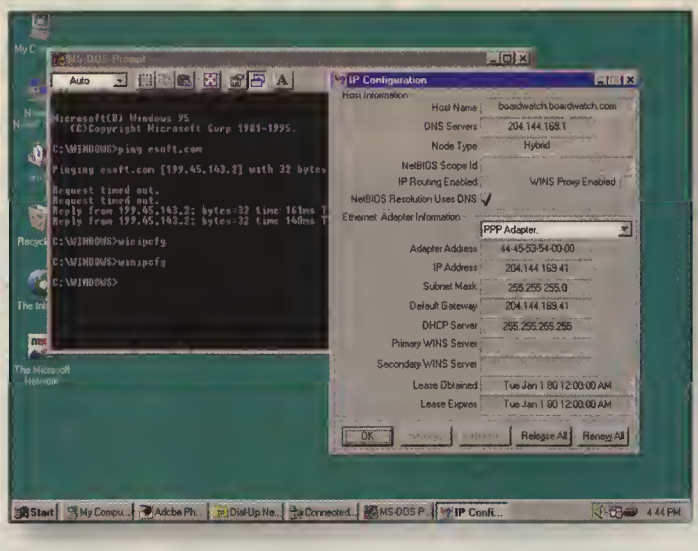
TRACERT is the command for TRACE ROUTE. If you TRACERT BOARDWATCH.COM, it will list out every machine or router between your location and the Boardwatch server. Again, you can tracert anyone.

FTP and TELNET are command line versions of the familiar UNIX programs for file transfer protocol and for remote login, respectively.

NETSTAT will show you a list of currently active connections from your machine. Since we don't have anything else running, it won't be very productive.

But Microsoft has included a fascinating diagnostic tool in WINIPCFG. If you type this command at the DOS prompt, it calls up an IP CONFIGURATION box listing all sorts of information - your host name, DNS servers, type of connection, IP address, subnet mask, default gateway, etc.

In this way, we can detect that we have successfully dialed our host, made the connection, and that it is effective. We could now successfully use any WINSOCK application over the network.



AUTOMATING THE PROCESS

But that's only fun for awhile. We want the computer to do it for us. And so we need to script the calling process in some fashion that eliminates all the manual entry of things.

Our first step is a shot in the dark at this point. Since the operating system did take our login name and password, it should be able to just dialup and make the connection and enter that login name and password. Actually there IS a defined standard procedure for logging on to PPP accounts. RFC 1334 describes PPP authentication protocols including the Password Authorization Protocol (PAP) and Challenge-Handshake Authentication Protocol (CHAP). PAP is pretty basic with the calling system simply transmitting its login name and password repeatedly until it receives authentication from the server. CHAP works a bit differently, with the server issuing a challenge message to the caller. The calling system calculates a "one way hash" value from a secret password and responds with it. The server compares this value with its own calculated value. The secret code or password is never actually transmitted at all and so provides a more secure logon procedure than PAP. Microsoft did incorporate PAP and CHAP into their PPP protocol. Many, but not all, Internet Service Providers use software that incorporates CHAP and PAP. So it might easily be the case that you can establish a secure logon with password using Windows95 without any script at all. More information on CHAP and PAP is available in RFC 1334 at **`http://www.pmg.lcs.mit.edu/rfc.html`**. This is one of the best searchable indexes of Request For Comments (RFC) documents we've found.

It is easy to see if your provider supports PAP. We'll simply turn off the terminal screen. From the desktop:

1. Click MY COMPUTER.
2. Click DIAL-UP NETWORKING.
3. Highlight the connection you created.
4. Click FILE from the title bar.
5. Click PROPERTIES.
6. From the GENERAL screen, click on CONFIGURE.
7. Click OPTIONS.
8. Clear the BRING UP TERMINAL SCREEN AFTER DIALING checkbox.
9. Click OK.

Now double click on the connection icon. Your logon name and password and dialing-from information should all be dis-

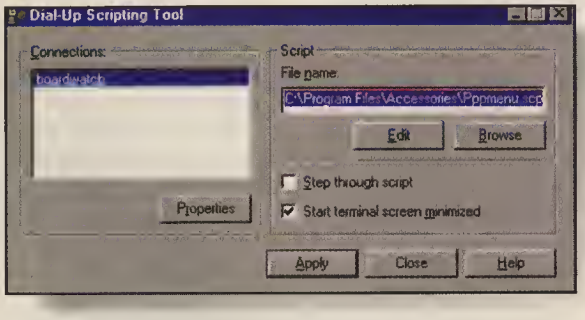
played the same as before. Finally click the CONNECT button on this CONNECT TO screen, just as before.

This time, the dialing advisory should pop up, no terminal screen will appear, and then the connection advisory should appear indicating the logon and password process - followed by your connection speed. Repeat your PING or TRACERT tests. If it all works, your ISP does support PAP and your connection is already automated.

If anything else happens, like failure, they probably don't. In this case, we need to do something very ugly - write a script. Logon scripts are nothing new in the online community. But they do get a bit technical. We found no way to associate a script with a dial-up connection without using a Dial-Up Scripting Tool provided with the Microsoft PLUS CD-ROM. This tool is added to your accessories menu. To access it:

1. Click the START button on your task bar
2. Point to ACCESSORIES
3. Click the DIAL-UP SCRIPTING TOOL.

This calls up a small screen that lists connections in a box on the left, and a file name box. If you click on BROWSE, you should quickly find a series of script files. Among them is PPPMENU.SCP. It is usually located in C:\PROGRAM FILES\ACCESSORIES\PPPMENU.SCP.



Finally, click on APPLY and that script is applied or associated with the dial-up connection highlighted in the box on the left.

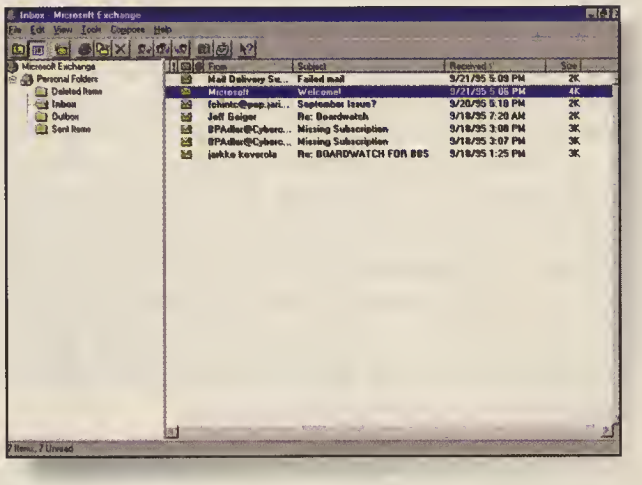
Often, you can simply run this script. Internet Service Providers are pretty similar in what they prompt on the dial-up screen. The script takes the logon name and password you entered on your CONNECT TO screen, that is IF you also checked the SAVE PASSWORD box. And it tries to make the connection.

If it fails, there is an EDIT function on the DIAL-UP SCRIPTING TOOL panel you can use to edit this script. Actually, you can use Notepad or WordPad or any editor to edit the script. And there is some documentation on the script language in Microsoft Word file titled SCRIPT.DOC in C:\PROGRAM FILES\PLUS! Directory.

Note that Windows95 sold over a million copies in the first four days of availability - a sales level not reached by Windows 3.1 until it had been on the market for 50 days. It is not likely that your ISP is unaware of this. They probably have a script already written for Windows95 to allow connection to their service if the standard PPP script doesn't work with their connection. Before spending the afternoon trying to write a script, you might check with them first. There is a collection of sample scripts available at **http://www.windows95.com/sampscrp.html**

The bottom line is that we were often told there was no way to script a PPP connection from Windows95. Not so. With the script language and the ability to associate scripts with dial-up networking connections, you should be able to automate any connection to any PPP account anywhere.

MICROSOFT EXCHANGE - E-MAIL PLUS



I have a thing about electronic mail. I suppose I should "get over it" with some 150 messages per day in the inbox but I never do. The web is very much in fashion these days, but I still think the highest role of the Internet, and its greatest service, was to break down the e-mail islands and form a common electronic backplane for e-mail services. I actually wrote an assembly language option module for eSoft's TBBS bulletin board system package so it could exchange electronic mail with the Internet via the ancient Unix to Unix Copy Program (UUCP) g protocol via a dial-up account. I am assured I'm the only one on the planet that ever wrote UUCP g in assembly language.

But ultimately there are two aspects to electronic mail that have always been utopia for me. First, is that it be global - I want to send e-mail anywhere in the world, to anybody, at virtually no cost, and without a lot of figuring out where they are beyond having their address. Obviously this will never be achieved as it would require EVERYONE to have an e-mail box somewhere. But it's come a long way already. Who knows?

The second aspect is that I've always wanted it on MY computer. That CompuServe or Prodigy or a BBS, even my OWN BBS, has e-mail waiting for me is moderately interesting - just not to me. Until it is on my computer, I have to deal with the BBS interface, or the CompuServe interface, or something. I would prefer it to show up on my PC without human intervention, and maybe show a flag that I have some that needs attention. But until it is on my PC, it isn't really "mine."

We're making progress here as well. In the past year, we've moved strongly toward Internet connections and a combination of Simple Mail Transport Protocol (SMTP) and Post Office Protocol (POP3) services coupled with e-mail clients that run under Windows. PC Eudora and E-Mail Connection are currently in a battle that almost seems venomous - especially when you consider both companies give the stuff away for free.

Microsoft has been toying about with e-mail for some time. Windows for Workgroups included an e-mail program. With regards to interface, it has always been "pretty good." But in the past, the program has been terribly closed, and very pointedly a lead-in to the Microsoft Mail program at about **$495**. Neither the mail clients in Windows for Workgroups, nor the Microsoft Mail program needed to really do a functional post office were at all open. The Simple Mail Transport Protocol (SMTP) gateway for Microsoft Mail was priced at over **$2700**. It was a very closed system.

That's changed somewhat dramatically with Windows95. It includes a program titled Microsoft Exchange that looks somewhat like earlier versions of MSMail. But it spawns from an INBOX on the desktop that seems to be one of the major components of the desktop. It still seems to point to ownership of a Microsoft Exchange Mail Server that is yet to be released. But things have gotten much better in the "open" department. The Exchange Server is rumored to include both SMTP and X.400 gateways. But the Exchange client in Windows95 can also be used to send faxes directly out of the e-mail program, to do e-mail with the Microsoft Network, CompuServe, and with the Microsoft PLUS add-on CD - most pointedly with any Internet e-mail service.

The Internet Pack in Microsoft PLUS includes a driver for Post Office Protocol (POP3) mail services. In this way, you can quite capably use Microsoft Exchange for e-mail with ANY Internet Service Provider. We take it a step further. We have our own SMTP server on the office LAN, and it is actually easier to simply route ALL mail through the POP3 server than it is to determine who IS and who ISN'T local or global for e-mail. In this way, we can easily send a message across the room, or across the continent. As best we can tell, we don't lose a thing using this technique.

Microsoft Exchange can even be configured with "multiple profiles." This would allow you to have multiple users on the same machine - each with their own private e-mail box. You simply "login" to the Microsoft Exchange client when you first start it up each day, and get your own set of in/out folders, address book, and logon to the POP3 server. I've set up the kids at home with a single machine that uses a single dial-up PPP account to link to the PPP server at the office, but they each have their own separate e-mail accounts on the POP server here.

Another major plus of Microsoft Exchange is that you can both format mail using **Microsoft's Rich Text Format (RTF)**, and also send attachments in **Multi-Part Internet Mail Extension (MIME)** format. The MIME format is an RFC standard that incorporates attachments by encoding them in Base64 ASCII text so that binary files, graphics, spreadsheets, etc. can "tunnel" through the myriad types of connections across the Internet. Exchange allows you to include, attach, or embed using Object Linking and Embedding (OLE) almost any type of file. So you can not only have text that is of different fonts, sizes, bolding, underlined, colored, etc. in your message, but easily embed a scanned photo of yourself in the message, along with a Microsoft Excel spreadsheet for example.

When Exchange sends it out over the Internet, it normally strips all this stuff out. But if you are sending it to someone, anyone, anywhere, that you know also uses Microsoft Exchange, you can add them to your address book with their Internet address and check the ALWAYS SEND IN RICH TEXT FORMAT box in the address book. And with Exchange configured for MIME, it takes all the pieces, creates a MIME format message with all the graphics, spreadsheets, and RTF instructions in encoded text, and sends it out. When the recipient receives it, if they receive it with Exchange, it reconstructs all of it.

Exchange includes a full bevy of the standard niceties - spelling checker, full text search, folders, ability to print messages, and address book. But with the POP3 Internet connection and the RTF/OLE functions, it took over the Boardwatch offices in less than a week. (We're not really like a company here - everyone uses whatever e-mail program, operating system, and dress code they choose.) Some of the messages get gruesomely large. Add a couple of graphic images and by the time MIME converts every three binary bytes to four ASCII text base64 characters, an e-mail message of 2 MB is common. As a result, I'm not sure all this SHOULD be done, but I'm pleased it CAN be.

We are going to describe a bit of configuration of Exchange. And since the first part of this article was on configuring a dial-up PPP connection, we will continue to assume a dial-up connection. But note that Exchange works superbly on a LAN as well. And even switching a laptop back and forth from logging on to the POP3 server viaEthernet TCP/IP or dial-up PPP is very easy. Obviously, everything works a bit faster and smoother over the Ethernet.

INSTALLATION WIZARD

The FIRST time you access Microsoft Exchange, you will encounter an automated configuration process termed a "wizard." If you have all the information from your service provider, you can configure almost the entire setup using this wizard. We're going to step through it rather tersely in this description, because many will already have Exchange basically "installed" to access the fax features or the Microsoft Network. We'll revisit all of the configuration items in the manual configuration elements of the program a bit later.

There are actually three easily locatable access points we've found. The wizard is available when you start the program for the first time. A MAIL AND FAX icon on the Control Panel allows you the greatest access to all aspects of configuration. And the TOOLS menu on the e-mail program itself allows you to configure almost everything you need. We'll walk through the wizard, and then describe the TOOLS function in a bit of detail. The MAIL AND FAX icon will by then be very familiar looking.

1. To start the wizard, simply click on the INBOX icon on the desktop. You'll see a services box listing MICROSOFT FAX, INTERNET MAIL, and MICROSOFT NETWORK. For our purposes, we want to clear the fax and MSN checkboxes, and put a checkbox next to INTERNET MAIL. Then click NEXT. (If the wizard fails to come up, simply skip ahead. You can configure all of this from the program itself as well.)

2. This brings up a box offering a choice of connection to the mail server, by MODEM or NETWORK. Check MODEM and click NEXT.

3. You'll see a SELECT CONNECTION request with a scrollbox. Select the PPP connection you configured earlier in this article and click NEXT.

4. The next box asks you to SPECIFY IP ADDRESS OR

DOMAIN NAME OF YOUR POP3 MAILSERVER. Either will do. This is a host system at your Internet Service Provider that acts as a POP3 mail server. Your ISP will give you this information in either or both formats. Ours was simply **mail.boardwatch.com**.

5. The next query is whether you want your mail processed OFFLINE or AUTOMATIC. We're using a dial-up modem connection here. If we were on a network, you would naturally want to receive any waiting mail as soon as you brought up the program. And whenever you wrote someone a message, you would want it to go out as quickly as possible. That is what AUTOMATIC implies. But if you are on a dial-up modem connection, Exchange goes through the entire process quite automatically of dialing your ISP, logging on, delivering the messages, retrieving any waiting messages for you, and then immediately logs off the system and drops carrier. So if you select AUTOMATIC, it will go through all of this when you first bring the program up, and each time you write a message. It can be quite irritating. If you select OFFLINE, you can bring up the program, read/write e-mail, and all of your outbound goes into the OUT folder. Then, you click on DELIVER MAIL, and it makes one call, sends all waiting outbound mail and moves a copy of it into the SENT ITEMS folder, and retrieves any waiting mail in a single session. You only make the connection when you specifically want to by clicking on the DELIVER MAIL icon. So for now, select OFFLINE and click NEXT. You can always change it later if you just want to watch the modem dial a lot.

6. The next screen asks for your E-mail address and full name. This will be used in the FROM address field in your message headers so that those you send mail to will know who you are and can reply. Fill it out and click NEXT.

7. The next query screen asks for your mailbox name and password. This is your POP3 logon name and password assigned by your Internet Service Provider. Note that it may or may NOT be the same as the PPP logon and password. But it is the method the POP3 mail server uses to identify you uniquely and pass you your mail. If you want multiple family members to each have their own POP3 account, but access them all using the same PPP account, this is very doable. Just tell your ISP you need multiple POP accounts but you'll access them all from one PPP login.

8. The next two screens regard your personal address book and personal folders and they allow you to specify a path and filename for each. Take the defaults. It doesn't matter at this point unless you want to change the drive perhaps.

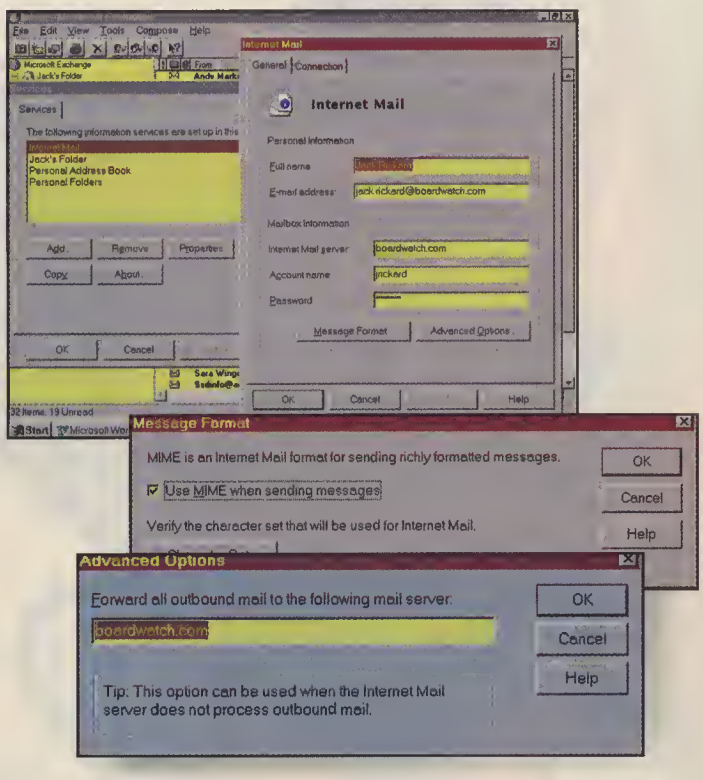
9. The next screen asks if you want to add INBOX to the STARTUP group. I don't. This will cause Microsoft Exchange to start up automatically whenever you fire up or reboot your computer. With Windows95, any time you change anything you have to restart the computer, so you'll be fighting your way out of Exchange about 30 times per day or so.

10. Click FINISH. We're almost entirely there.

ACCESSING MICROSOFT EXCHANGE

To start up the program at any time, simply click on the INBOX icon on the desktop. The program will initially come up in a form listing messages only. There should be one from Microsoft welcoming you to the wonderful world of e-mail. We like to see folders on the left and messages on the right so we can move messages freely between folders. So click on VIEW and put a checkbox next to FOLDERS to change the basic screen.

The menu bar sports a TOOLS function that holds most of the configuration power of Exchange. Click TOOLS and select SERVICES. Double click on INTERNET to configure.



This screen holds much of the account information filled in during the installation wizard including your full name as you want it to appear in your outbound messages, your e-mail address, the domain name or IP number of the POP3 server in INTERNET MAIL SERVER, your POP3 logon name in ACCOUNT NAME, and the access password for your POP3 account in PASSWORD.

Note there is also a MESSAGE FORMAT button. Click this to get the MESSAGE FORMAT box. This box has a single checkbox for USE MIME WHEN SENDING MESSAGES. We clear this box so that the default is to use UUENCODE instead of MIME when sending messages. We'll talk more about this in a moment.

Note there is also a CHARACTER SET button. This allows you to select between ISO 8859-1, Norwegian, Swedish, and US ASCII. We generally use US ASCII.

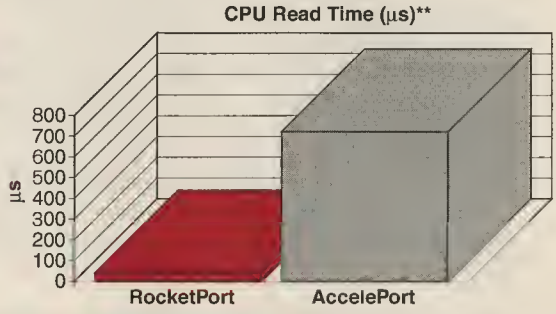
There is also an ADVANCED OPTIONS button. This function allows you to enter a domain name for the SMTP mail forwarder. Usually, this isn't necessary. The POP3 server and SMTP mail server are often the same machine. But at times they are not. When you SEND electronic mail, it goes directly to an SMTP forwarder which in turn delivers the mail to the destination. The POP3 server, by contrast, receives mail for you 24 hours per day whether you are connected or not. If your SMTP mail forwarder is different, you can specify it on this screen. Otherwise, it is assumed to be the same as the POP3 server.

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SCO OK

yes It runs with UnixWare

yes NetWare Tested and Approved

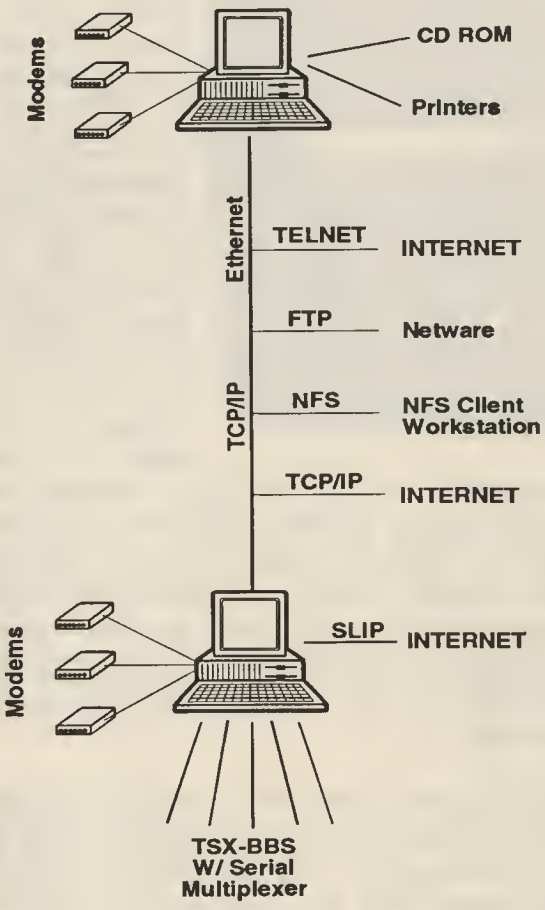
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At the top of this configuration box, there is a CONNECTIONS tab. Click on this to access config info about your connection. Here you can specify whether you do mail over a network or by modem. Select MODEM and select the dial-up connection configured earlier. Also be sure to check the WORK OFFLINE AND USE REMOTE MAIL box. This keeps Exchange from dialing to deliver each message you send.



That is about it for configuring the POP3/Internet connection from exchange. Under TOOLS, there are a couple of other items of interest. OPTIONS contains a series of tabbed boxes for various preferences regarding fonts, spelling, and so forth. One of note under the GENERAL tab is WHEN STARTING MICROSOFT EXCHANGE. The two options are PROMPT FOR PROFILE TO BE USED and ALWAYS USE THIS PROFILE. As mentioned, you can have multiple users of Microsoft Exchange and you can add new personal folders and address books for each of them - each stored under a different profile name. We had configured this via the CONTROL PANEL and the HELP files insisted that Exchange would prompt for which user was using the program whenever you called the program. But it didn't until we set this flag, buried on this screen, for PROMPT FOR PROFILE TO BE USED. Select ALWAYS USE THIS PROFILE if you are the only user.

We've mentioned several times that you can SEND messages without actually delivering them, and in fact we've configured Exchange here specifically to NOT send until you have finished all your correspondence. All sent messages will appear in the OUT folder. Under the TOOLS menu is a DELIVER NOW entry also available by pressing CTRL-M. If you click on DELIVER NOW, Exchange will dial your host, send any outbound mail via your SMTP forwarding server, and logon to the POP3 server to retrieve any mail waiting for you - and then disconnect. The mail that was in the OUT folder is now copied to the SENT ITEMS folder.

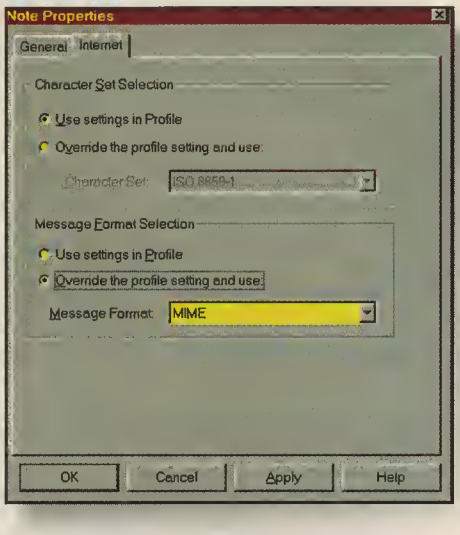
You do have to do this often. And Exchange does sport a customizable tool bar. If you click on TOOLS and CUSTOMIZE TOOL BAR, you can both add available functions to the tool bar and remove items you rarely use. When using a dial-up account, we like to add the DELIVER NOW function to the tool bar where it is a single click away - as a convenience.

SENDING MESSAGES

Microsoft Exchange has some very interesting functions. But we found them a bit difficult to use and in one case it simply doesn't work correctly. The problem is in dealing with two universes of possible recipients - those with Exchange, and those without.

Normally, if you use a lot of fonts, colors, underlining, bold, and attach a variety of files to a message, and then send it to an Internet address, Exchange strips all of that out and just sends it. If you know that the recipient DOES use Microsoft Exchange, you can still send him the message with all the glitz, it's just awkward to do so.

First you add the recipient to your address book as an Internet address but with the ALWAYS SEND IN RICH TEXT FORMAT box checked. This keeps Exchange from stripping out all the goodies when you send them a message. But you also have to override the profile to use MIME to encapsulate this stuff. You can do this by clicking on the Properties icon when you are drafting the message, or by clicking on FILE and PROPERTIES when you are drafting the message. The PROPERTIES box includes both GENERAL and INTERNET and you want the INTERNET tab. There, you can set it to override the profile and use MIME instead. Then, when you send your message, it will retain all the attached files, photos, and fonts, and they will be MIME encoded in the message text in such a way that all can tunnel through the Internet mail system and the recipient's Exchange mail program can reconstruct the original. A bit of a mess to accomplish, but it works.



So what is MIME, and why didn't we use it as the default in our profile?

MIME is an RFC standard (RFC-1521) originally proposed by Nathaniel Borenstein. It stands for **M**ulti-part **I**nternet **M**ail **E**xtensions. The concept was to develop a method to include an endlessly extensible variety of attachments to electronic mail, and to get them through the Internet mail system. Often, mail gateways on the Internet could only handle 7-bit ASCII text. So all binary files have to be presented in 7-bit characters versus 8-bit binary data in order to be assured of making it through any gateway on the network.

Previously, if you wanted to attach a binary file to a message, you would use a program titled UUENCODE. UUENCODE used a simple function to convert each three binary bytes into four ASCII characters. The recipient could then use UUDECODE to reconstruct the original binary file from the ASCII text.

MIME not only replaced UUENCODE with a more robust Base64 quoting method, but specified a means to designate multiple file attachments in an e-mail message. In this way, you could send a message with an attached sound or video clip, a photograph, a spreadsheet, etc. in a single message. If the recipient's mail program was MIME-capable as well, they would hear the sound, see the photo, read the message, and could access the spreadsheet. And it all traveled as a single message document.

This sounds great, and in fact, to use Microsoft's Rich Text Format, you must use MIME to deliver the messages. The problem is that Microsoft's MIME implementation is hosed in a very interesting way. If the recipient doesn't use Microsoft's Exchange program, and you have the MIME format set as default, each line of any ordinary text e-mail message appears to be terminated with an ugly **=20** trailer. It is unsightly and makes a mess of your e-mail. And you won't even know you sent it that way. It looks normal on your screen, but the recipient's e-mail program will present it in the ugliest possible way.

Since most of our correspondence at this point is to people who DON'T use Exchange, we set MIME off. This causes file attachments to be uuencoded, and the text of the message to appear as normal. When we want to send a message to someone who does use Exchange, we have to add them to the address book, check the SEND USING RTF box, and also override the default to use MIME encapsulation.

Beyond a few of these configuration items, we found Exchange reasonably easy to use. You can experiment with it a bit. You can easily address mail using the address book, capture addresses to the address book from inbound messages just by double clicking the FROM address on the message, and so forth. We never did figure out a convenient way to automatically append the traditional **.signature** file to all outbound messages, but beyond that this program does everything we've ever found in an e-mail interface.

Ben Goetler, of Angry Greycat Designs, has written a DLL extension to Microsoft Excange to add the missing signature file function he calls Internet Idioms and it is available at **http://www.halcyon.com/goetter/** Ben is currently working on a book ***Developing Applications ForMicrosofts Exchange*** due from Microsoft Press early in1996.

Further, Microsoft Exchange uses the Mail Application Programming Interface or MAPI. This common API for mail has in the past landed with a dull thud heard not more than a few feet. But it does make it easy to add a hook to e-mail in almost any application with about 50 lines of pretty much canned code. An example of this is the new Microsoft Word in Microsoft Office for Windows95. You can write a long e-mail message in Word, and click SEND. It goes out through Microsoft Exchange, but you are never actually in Exchange. You did it from Word. A setup option allows you to install WordMail. This essentially replaces the Notepad-based text editor in Microsoft Exchange with a much more powerful Microsoft Word editor. It's not a bad life. In fact, the new Microsoft Office is a joy to use all around. They have a new scheduler that ALSO allows you to keep a contact database, and e-mail out of that. It all heralds a new era of mail-enabled applications. Combined with OLE, which becomes a real thing with this Windows release, almost any application can communicate globally via e-mail.

Overall, it is an exciting addition to electronic mail. Dealing with MIME and RTF as to who can read it and who can't is a pain and a needless one. Microsoft needs to fix their MIME format to deep-six the **=20** kludge, and perhaps make the RTF selection in the address book automatically override to use MIME on Internet mail. Too complicated and too dicked up at this point. But we still love it.

SUMMARY

Windows95 is NOT an "upgrade" to Windows version 3.1. It is an entirely new operating system and we think it may comprise the most significant event in the development of personal computers since the introduction of the IBM PC in 1981. We found it incredibly rich in features and very open to communicating with other computers via virtually any type of network. The TCP/IP functions are particularly rich and nearly trouble free. It runs DOS programs much better than version 3.1, runs most 3.1 Windows programs adequately, and the new 32-bit apps are a joy to use. It rather requires a lot in the way of hardware. But we're very enthused about the communications features in Windows95. In future issues of Boardwatch, we'll do more on Microsoft Network, faxing directly out of Exchange, SLIP and CSLIP connections, and connecting to Windows Networks anywhere in the world using TCP/IP as the transport.

Microsoft maintains a web site for Windows95 support at **http://www.windows.microsoft.com** and naturally enough, they have quite a bit of info on Windows95. The web site is a bit interesting in that it is actually 10 web sites around the U.S. and Europe that use a technique titled "round-robin domain name service" to apportion connections between these various sites. They run on DEC Prioris 590 DP dual-processor Pentium machines with 128 MB of RAM.

But a number of other web sites have sprung up offering 32-bit shareware programs for the new Operating System. We found the new WinZIP 6.0 particularly well done. The accompanying list of web sites lists some of the more popular web haunts for Windows95 enthusiasts.

WINDOWS 95 INTERNETWORKING HEADQUARTERS
http://www.windows95.com
Supported by Morse Telecommunication, Inc., and Midwest Communications, Inc., this site is designed by Steve Jenkins, a Brigham Young University student in Provo Utah. It is just thoroughly outstanding in all respects with particularly good information on connecting Windows95 to the Internet. I wish we had found it BEFORE doing most of this article.

WIN95
http://www.win95.com
Supported by digitalNATION in Alexandria Virginia. This site provides pointers to a host of other Windows95 web pages.

CONSUMATE WINSOCK APPS SITE
http://www.cwsapps.texas.net//win95.html
Forrest Stroud's Consumate Winsock Apps site offers a good collection of Windows95 Internet applications.

PROCESS SOFTWARE CORPORATION'S WINDOWS95 PAGE
http://www.process.com/win95/
This site sports Windows95 tips, a frequently asked questions (FAQ) file and a selection of Windows95 shareware.

NETEX UNOFFICIAL WINDOWS 95 SOFTWARE ARCHIVE
http://www.netex.net/w95/
Discussion forums on the web - a BBS discussing Windows95.

WINSERVE
http://www.winserve.com
Web site for information about using various Windows95 WindowsNT functions such as folder and printer sharing over the Internet.

WIN95NET SOFTWARE ARCHIVE
http://www.pcix.com/win95/software.html
Software archive and excellent collection of magazine articles on Windows95. ◆

(Durand)

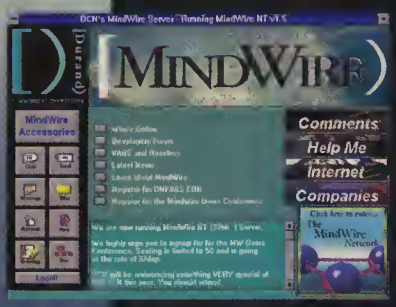
COMMUNICATIONS NETWORK

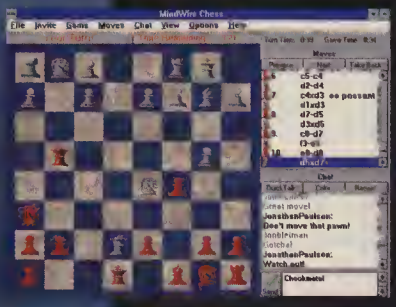
ONLINE SOFTW

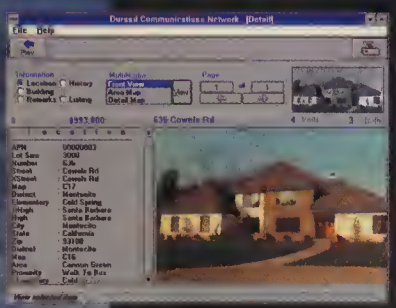
MINDWIRE

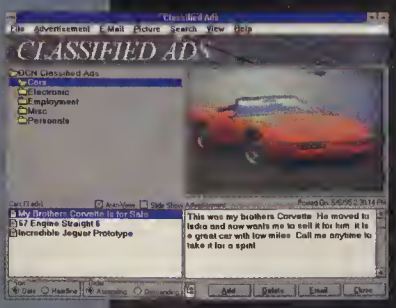
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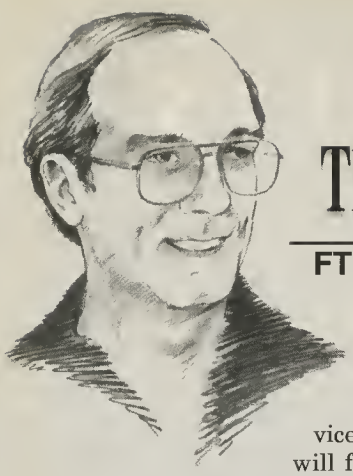
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The Compleat INTERNAUT'S Toolkit by David Hakala

FTP the Hard and Easy Ways

The Compleat Internaut, by definition, has to know all of the ways to do things. The point-and-click methods of Web browsers and GUI online services are convenient. But sooner or later, you will face a UNIX shell account or a BBS' text-only interface. Naturally, this will happen when people are watching you. There will also be times when the stick-shift method is the best way to do what you want to do, or the only practicable option.

David Hakala first appeared in *Boardwatch* in February, 1989. From May of 1991 until he assumed the position of Editor at Fault at *BW* in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book *Hot Links* with Mark Eppley, CEO of Traveling Software, and penned his own book, *Modems Made Easy*, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at **mailto:david.hakala@boardwatch.com** or at **(303)973-6038**.

FILE TRANSFER FOIBLES

If you use a Web browser or one of the Big Three services, you can spend a lifetime downloading free software, images, sound files and other goodies without knowing what you're doing. But the no-brainer file-sucking methods are not always available.

And suppose you want to send a file via the Internet? Browsers don't permit uploading. Encoding a binary file as 7-bit ASCII characters and then e-mailing it is a pain. Many files exceed the message size limits of Internet mail servers (20,000 to 50,000 bytes, depending on the servers your message passes through). You have to break large files up into several messages. Reassembling and decoding such messages at the receiving end is even worse. I'd rather await a snail-mailed diskette.

E-mail file attachments won't work if your mailer uses MIME or UUENCODE and mine doesn't. If you're sending a really big file, you may fill someone's mailbox to the bursting point. Once I sent myself a 10 Mb MIME-encoded file attachment. Gary Funk had to delete the packet from our mail server before I could retrieve any other mail.

Every Compleat Internaut needs to understand the basics of FTP — the Internet's File Transfer Protocol. Below we'll examine the command-line forms and a Winsock semi-automatic version of this essential tool.

FTP AS A SHELL GAME

Don't be misled by FTP's "protocol" name. It's more than a black-box module you can add to a terminal program, like Zmodem or other file-transfer protocols. FTP is an interactive client program. It accepts commands from the user, allowing you to specify a destination site (an FTP server) and pass commands to the remote server, in addition to handling the low-level chores of error-correction, flow control and so on.

FTP must reside on a machine that is directly connected to the Internet. But you don't need to have the FTP client on your local hard drive. It may reside elsewhere, and you can interact with it through any ASCII terminal program over a LAN or a dial-up link. Consequently, you don't need a direct connection to the Internet; you can use someone else's. Typically, you will use a UNIX shell account to access FTP. Here's how it's done.

CONNECTING TO A REMOTE SITE

Log on to your host and drop to the UNIX command line. Enter the command **ftp <sitename>** where **<sitename>** is the domain name or IP number of a remote site, thus starting FTP and making a connection with one command line. For example, either **ftp board watch.com** or **ftp 204.144.169.1** will connect you to ***Boardwatch Magazine's*** ftp server.

If you used a valid FTP sitename, an ASCII text greeting screen should soon appear. If, however, you misspelled the sitename, the error message "**unknown host <sitename>**" may appear.

Sometimes the mistake is not yours, but is made by the Domain Name Service lookup system. If the message "**resolving <sitename>**" appears and remains for a while, followed by "**unable to resolve <sitename>**" then it's possible that DNS is having problems today. Double-check the sitename and try again later.

Greeting screens may be short or long, informative or just drivel. Read them anyway; often they contain orientation instructions you'll find useful once you're inside the remote FTP site.

ANONYMOUS LOGINS

You will have to log in to the remote site with a username and password. Publicly accessible FTP sites reserve the username **anonymous** for use by unknown visitors who do not have an assigned account. Enter the word **anonymous** at the username prompt. When prompted for your password, enter your complete e-mail address; it's considered good Netiquette to identify yourself in this way.

Anonymous users are at the bottom of the privilege pecking order on most FTP sites. Each site will typically limit the number of simultaneous anonymous users, reserving some ports for its fully authorized users. If you get a message indicating that the number of anonymous users has been exceeded and you are denied access, try again later during offpeak hours.

If you pass all of these hurdles, you may face another screenful of greetings, news and instructions; in

any case, the last line will be the **ftp>** prompt. Congratulations; you're in!

DISCONNECTING FROM A REMOTE SITE

When you enter a strange place, always know where the exits are. The commands **bye** or **quit** will close the remote connection and exit the FTP client program. These commands are the polite way to tell the remote site that you are leaving; it will close its end of the connection in an orderly fashion. If for some reason the remote site "hangs" or locks up, pressing the **Ctl-]** (control-right bracket) key combination will usually interrupt the currently executing command, break the FTP connection and exit your FTP client. It's the equivalent of dropping carrier when a BBS hangs. Some servers use a different "escape" key combination; usually it's specified in the greeting screen.

Note: after closing a connection to a remote site, you will still be logged in to your UNIX host at the command line. Be sure to disconnect from your host in the prescribed way.

NAVIGATING AN FTP SITE

Several commands allow you to see where you are on a remote FTP site, switch to different directories and view the contents of directories. Here are the most commonly used navigational commands:

Common FTP Navigational Commands:

dir - lists files and subdirectories in the current directory of the remote site, including size, date and other information about each item. Wildcards are acceptable.

ls or **nlst** - same as **dir**, but provides only file and subdirectory names

cd <dirname> - change to the specified directory on the remote site

cdup - move one level up the remote site's directory tree

pwd - lists the name of the present working directory on the remote site

lpwd or **!pwd** - lists the name of the present working directory on your host site

Listing 1

The **dir** command provides a verbose file/subdirectory listing that can be rather confusing to DOS or Windows users. Read the file information shown in Listing 2 (below) from right to left, instead of left to right (this is UNIX, remember). The file **000index.txt** was last modified on **Nov 22 1994** and it is **1003** bytes long. Most of the other stuff is irrelevant to our purposes. However, the *leftmost* character in each line *is* relevant; if it's a **d** then the item is a directory; otherwise, it's a file of some sort.

Results of FTP dir command:

-r—r—r—r--	1 root	ftp	1003	Nov 22 1994	000index.txt
-r—r—r—r--	1 root	ftp	114843	Jun 26 21:09	aiftp100.zip
dr-xr—r——	1 root	ftp	0	Sep 26 1994	archie
dr-xr—r——	1 root	ftp	0	Sep 26 1994	blt

Listing 2

FINDING INSTRUCTIONS

The raw directory listing shown in Listing 2 provides no file or directory descriptions, as a friendly little BBS would do. However, most FTP sites have a more-or-less helpful text file somewhere in the default anonymous user directory; it may be named **READ.ME**, **INDEX.TXT**, **WELCOME.MSG** or something equally hard to find. The file **000index.txt** in Listing 2 looks useful; the sysop kindly gave it a name that puts the file at the top of the alphabetic listing. You can display it or any other file with the **read <filename>** command. (Don't use **read** on binary files if you can help it. The results are noisy and incomprehensible.)

ASCII & BINARY TRANSFER MODES

FTP includes two file-transfer modes. ASCII mode is fast but lacks error-correction; plain text files can be safely transferred, but binary files will likely be scrambled. BINARY mode is used for error-corrected transfers.

Note: many FTP sites default to ASCII mode, so be sure to switch to binary mode before attempting to transfer any binary files. Enter the type command to see which mode you are in at any moment. Enter the **ascii** or **binary** command to switch from one mode to the other.

DOWNLOADING SINGLE & MULTIPLE FILES

After a few **cd** and **cdup** commands, you will hopefully find something worth getting. Appropriately, the **get <filename>** command is used to transfer a single file from the remote site to your host site. (But that's just half of the trip. We'll explain how to get a file from your host to the computer in front of you in later paragraphs.)

Note: file names are case-sensitive in UNIX. Entering **get thisfile.zip** will yield **file not found** if the real filename is **ThisFile.zip**.

Multiple files can be downloaded in a batch using the **mget <filename1 filename2 ... filename#>** syntax, or using a wildcard such as **mget <*.gif>**.

MONITORING FILE TRANSFERS

FTP lacks an elapsed-time counter and throughput monitor. Back in the good old days when FTP was written, the boys at DARPAnet didn't worry about connect time charges. But it can be disconcerting to start a multimegabyte transfer and watch a static command prompt for several minutes or hours. So FTP includes the **hash** command, which should be invoked before starting a file transfer. The **hash** command places a simple # mark on your screen for every few bytes successfully transferred. The default value may be between 1024 and 4096 bytes, depending on your FTP client's settings. The **help** function should tell you how many bytes are represented by a hash mark.

DOWNLOADING FROM YOUR UNIX HOST TO YOUR PC

So far, all we have done is copy a file from a remote site to your shell account host site; the file still is not on your local hard drive. Now we have to find the file and download it from the host site to your local drive. We can't use FTP because your local machine does not have a copy of FTP or a direct connection to the Internet; if it did, the shell game would not be necessary.

So we use a more conventional file-transfer protocol. As with any file transfer, you will need to find a match between protocols supported by your terminal program and those supported by the remote host. Check the host's documentation for available protocols and their command syntaxes.

The Kermit protocol is found on virtually every UNIX system, and in most terminal programs. Kermit is generally one of the slowest file-transfer protocols, but when properly tuned it compares quite favorably to Zmodem. See **http://www.columbia.edu/kermit/perf.html** for benchmark data.

First, be sure you have selected Kermit in your terminal program. Then enter the command **kermit** at the UNIX command line to start it on the host site. Issue the command **send <filename>** to start a file transfer from the host to your PC. You can also use wildcards to download a batch of files. When the transfer is over, enter the **quit** command to close Kermit on the host site.

Note: the procedure above assumes that the file(s) you want Kermit to send are in the current directory on the host site. Rational host sites retrieve FTP files to the current directory, the one in which you will be when you exit an FTP session. But some sadistic sysops play hide-and-seek with your files. You may need to switch to another directory on your host site before invoking Kermit.

UPLOADING FILES

Yes, some people occasionally *send* a file to an FTP site — a few of our writers, for example. The shell account upload procedure is similar to the downloading procedure:

- Log on to your UNIX shell account.
- Invoke Kermit (or another protocol) on the host machine. Within Kermit, the command **receive** tells Kermit to prepare to receive a file.
- Upload the selected file(s) from your PC to a directory on the shell host.
- Exit the host's receiving protocol, if necessary.
- FTP to the desired site and log in. Switch to a directory in which you have been given upload privileges. Anonymous users may not have any upload privileges, but some sites provide an "incoming" directory where anonymous users can send files.
- Enter the command **put <filename>** to send a single file to the remote directory; that is, "put" the file there. The **mput** command allows batch uploads, using file specifications **<filename1 filename2...>** or a wildcard specification.

Congratulations! You now know how to FTP the hard way. If you can get to a shell account or one of the many BBSs that offer command-line FTP access, you can send or retrieve files across the Internet. You're a more Compleat Internaut than the next guy.

Now let's try it the sensible way, using a Winsock connection and a Windows FTP client called ***CuteFTP***.

A WINSOCK FTP CLIENT

A Winsock connection makes FTP a lot easier. Forget command lines; just point and click your way through a directory tree similar to File Manager. Also forget the two-stage remote-to-host, host-to-local rigmarole. Files will land directly on your local hard drive.

I've become enamored of a program called CuteFTP since Forrest Stroud reviewed it in his Consummate Winsock Apps column. It can be found at **ftp://papa.indstate.edu** in the **/winsock1/ftp** directory. It's small (about 364 Kb), wonderfully simple and logical, and it's free for non-commercial users, excluding government agencies. The registration fee for commercial and government single users is just **$30**, and site licenses are available.

CuteFTP loads fast and displays a Site Manager screen from which you can create and navigate a system of folders. A number of popular FTP sites come preloaded in Site Manager — even some of CuteFTP's competitors are listed! Within each folder you can add and edit individual FTP site entries, including username and password data (there's a checkbox for automatic anonymous logins), site address, the initial remote and local directories to be opened and other logon parameters. See (Figure 1)



Figure 1: CuteFTP's Site Editor

The program can automatically detect whether binary or ascii mode is appropriate for a given file and switch modes accordingly. You can select either mode from a menu bar or permanently specify a mode in a site entry. Directory navigation and file selection are point-and-click easy. (Figure 2) To download a file, just drag and drop it to a local directory; uploading works the same way in reverse. It doesn't get any easier.

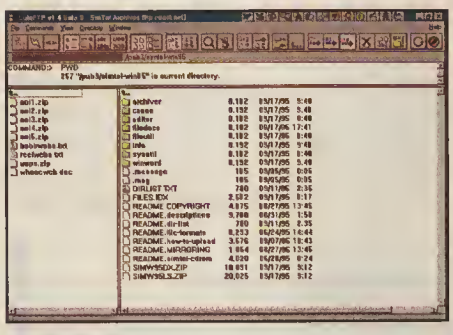


Figure 2: CuteFTP - the Winsock Way

CuteFTP includes the time remaining /elapsed and characters-per-second monitors that FTP omits. I get excellent throughput with this client, often better than dial-up Zmodem transfers. It features command-line parameters and scripting that can be added via the Properties | Command Line dialog in Windows, allowing one-click automatic file runs. Add CuteFTP to your Winsock toolkit. ◆

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DR. BOB by Bob Rankin

ANSWERS — TWENTY CENTS EACH

Most people marvel at the discovery that almost everything out on the Internet is free, and even though the number of commercial domains on the Net now outnumbers the educational ones there is still a good deal of anti-commercial sentiment out there.

But is there a place for fee-based services on the Net? In a world of entrepreneurs trying to sell access, is there a buck to be made as an Information Provider? Can you sell information and still be accepted in cyberspace?

Ask Steve Kirsch, founder and CEO of InfoSeek — **http://www.infoseek.com** — a highly rated search facility on the Web. I spoke with Steve recently about InfoSeek and his philosophy on selling information. Here's what he had to say...

***Doc**: Steve, tell me what services you offer at InfoSeek.*

SK: There are two separate services that we offer. There's the free Net Search service that allows people to search the Web at no charge, and we also have what we call the Professional version which we charge for and that allows you to search in a lot more databases.

We have the world's best index of WWW pages, the best index of USENET News, full text of over 50 computer publications, newswires from Reuters, Associated Press, etc., detailed company profiles, and also movie book & video reviews.

***Doc**: What is your fee structure?*

SK: We have three different options, and subscribers pick the one most appropriate to them. There's the **$0.20** "pay by the drink" search for infrequent users, the Light Use plan and the Standard plan which cost **$1.95** and **$9.95** per month respectively, and allow more searches.

***Doc**: How many takers on the Professional version?*

SK: We've had over 150,000 people open accounts so far. Some of them stick with us and some drop out.

***Doc**: How many queries do you handle on a daily basis?*

SK: Right now we get about 2.5 million requests a day.

***Doc**: What type of hardware and Internet connection do you need to handle that load?*

SK: We have a bunch of Sun machines, a T3 and T1 line coming in, a couple of routers, about 350 gigabytes of disk space. Altogether, there's 30 CPUs.



Steve Kirsch CEO of Infoseek

***Doc**: Was InfoSeek your baby from the outset?*

SK: Yeah, I started it. It was primarily out of the frustration of finding information myself.

***Doc**: Lycos and company weren't cutting it for you?*

SK: Well, when I started this, there was no Lycos. And my vision was not just finding information on the Web, but finding information in general. That's why we offer all the other databases on our Professional service.

***Doc**: How does your fee-based service compare to others like Dialog or Lexis?*

SK: It's very inexpensive, it's very easy to use, and the search capabilities are more powerful. We compare favorably in every category except for the number of databases available, but we beat the pants off of them in all of the other areas.

***Doc**: What other endeavors were you involved with before InfoSeek?*

SK: I started Frame Technologies (maker of FrameMaker) and ran that for the first four years. And prior to that I started Mouse Systems which made the optical mouse.

***Doc**: Where did you find the money to get started, and how many people are on staff at InfoSeek?*

SK: It was all through private investors — individuals and venture capitalists. Right now we have about 30 people working for us.

Bob Rankin, known as "Doctor Bob" in the online world, is a writer, computer programmer and consultant who enjoys exploring the Internet and sharing the fruit of his experience with others. Bob is co-driver of The Internet TourBus and author of "Accessing The Internet By E-Mail," which has circulated widely on the Internet, and is available in 15 languages. For info, send **mailto:BobRankin@MHV.net** or via the web at **http://csbh.mhv.net/~bobrankin**

***Doc**: What kind of problems have you encountered running an online business? Any hacker trouble?*

SK: No, not really, just the normal set of problems, people registering for accounts with phony ids, people giving an e-mail address of someone else, those are real common. I don't know that we've had anyone try to break in here or really do some damage.

***Doc**: Aside from InfoSeek, what sites do you frequent on the Web?*

SK: It's mostly finding information, as opposed to visiting specific sites. What's useful about the Web is not that "Oh I go to the the weather site all the time," but if I need to find weather, or the HTML spec or get a stock quote, it's all available. That's the best part.

For stock quotes I use the PAWWS server — **http://www.pawws.com** — and Quote.Com — **http://www.quote.com**. Therere's also a neat service called SearchAmerica — **http://www.searchamerica.com** — which will find phone numbers for people all across America.

***Doc**: Any favorite online hangouts - discussion groups, etc?*

SK: No not really — I've got a whole list of websites of our competitors. The CRAYON (CReAte Your Own Newspaper) at **http://www.eg.bucknell.edu/~boulter/crayon/** is interesting. Ive gone to PathFinder — **http://www.pathfinder.com** — and occasionally the CMP site — **http://www.cmp.com** — to do some searching.

***Doc**: Why should a person use your service instead of Lycos or WebCrawler?*

SK: Well we do offer the free Net Search service, so people aren't paying to do those types of searches here. And with the Professional service, we focus on the things that you can't get for free because they are commercial databases.

As to how our paid web search compares with others, we have the world's largest index of web pages. It's 2 GB worth of index information, so it's larger than Lycos or anything else. And secondly, we index ALL of the words in all of the documents that we fetch. So if you're looking for a word or phrase in a document, you're going to find it using our system. And we're more current — there's nothing older than 30 days in our index. We also offer phrase searching and case sensitivity in searches which can make a big difference when searching for proper names like "NeXT Computers."

"We have the world's largest index of web pages... 2 GB worth... larger than Lycos or anything else."

***Doc**: Who are your biggest competitors?*

SK: We have competitors both on the free side and the paid side. So on the free side we compete with Yahoo!, Lycos, and other web search services. On the paid side, we compete with IBM's InfoMarket product, NlightN from The Library Corp, and some others.

***Doc**: Any feedback from those who buy ad space on InfoSeek?*

SK: It's been pretty good. It's a new media so a lot of people are not sure how effective it will be. It's a bit of a missionary sell, kinda like selling TV advertising back when it first started. We know what the click rates are on the ads, and a really good ad will pull 5% of the people who encounter it. It's like direct mail — if it's really hot it will get good response. But the difference between doing an ad here versus direct mail is you don't pay postage, so it's super cheap. Except right now it's not targeted — you can't reach just males, age 35 and over, who use IBM PCs. We have the ability to do targeted, but we haven't focused on that yet.

"God did not say that everything on the Internet must be free."

***Doc**: What special projects do you have underway?*

SK: We have a new product coming out that integrates the search and browse capabilities which will be available very soon. It operates on the bookstore metaphor — sometimes you know exactly what you want when you come in, sometimes you have only a category in mind, and sometimes you've got free time and just want to browse and see what's there. We want to offer that same environment for searching the Net.

***Doc**: How will you deal with the problem of having so much information that just indexing it becomes difficult?*

SK: We'll be expanding the databases we have available, to include over 1000 full text sources online, and we're trying to put systems in place to resolve those problems of scale. We also want to focus on making searching easier for people.

***Doc**: How do you respond to the hardline anti-commerce types?*

SK: When we began charging for information we were charging a factor of 25 less than everybody else. An article you could buy on CompuServe for **$2.50** we would charge **$0.10** for, and (yet) a lot of people complained even though we were dramatically lowering the price. They were saying "information should be free," "you're polluting the net" and things like that, so you just ignore those people.

What we're doing is making information inexpensive and available, but we can't do that for free. And we're not gouging people either. God did not say that everything on the Internet must be free.

We're going to provide some information for free, and we're going to provide other information that can't be free because the providers of that information need to get a certain amount of money in order to cover their costs. Some people understand that, and some people don't.

***Doc**: Is the Internet secure? Does it matter?*

SK: Right now it's not much of an issue for us, because we're not manipulating people's bank accounts here. We find that about half of our customers use the Internet to provide their credit card numbers to us and half use the 800 number when they sign up.

***Doc**: With so many new users flocking to the Internet, are we facing an electronic traffic jam in the near future?*

SK: No, I think that there's enough pipe laid that it shouldn't be a problem for the immediate future. People are charging enough for access that there's enough money to pay for it. ◆

ISP Talk by Bob Rankin

CONCENTRIC RESEARCH CORP. — POISED FOR SUCCESS

The BBS is dead. Uhh, I mean the BBS must become a site on the Internet. Ummm, what I'm trying to say is that the Web is becoming a BBS. Er, well... who knows?

Nobody knows how the fight for online turf will shake out, but there's one company that seems to be well positioned to capitalize on whatever the outcomes may be.

Concentric Research Corporation, one of the nation's leading providers of low-cost network services, is in the business of connecting people to information. You want to dial up a BBS on the other side of the country and pay local phone rates? Connect yourself to the Internet? Or jack your BBS into cyberspace with a T1 line? No problem — Concentric has a wire for you.

Concentric has built a nationwide dialup telecommunications network that provides access to the Internet and private host computers via direct IP or asynch connections. And Concentric is rapidly expanding as a wholesale supplier of fast, reliable and inexpensive data communications services.

The company has two divisions: Consumer Services sells flat-rate dialup access to users of BBSs, the Internet and multi-player games. Network Services offers customized virtual network products to support the needs of larger clients.

BBS DIRECT

Concentric's BBS Direct program allows callers across the U.S. and Canada to connect to dozens of the most popular BBS systems without making a long distance call. When callers connect to BBS Direct, they are presented with a menu of BBS systems and can connect to any of them with a point, click or grunt. Membership also includes full access to the Internet as well. Pricing starts at **$7.95**/month and goes to **$29.95**/month for unlimited hours.

Concentric recently doubled the size and capacity of its network, which now has POPs reaching into 92% of the U.S. and 85% of Canada. And if you're on the road or out in the boonies, they have 1-800 dialup service too. All in all, this seems like a pretty good deal for both the callers and the sysops. The callers save money on long distance service, and the sysops get new traffic from people who stumble over their icon on the BBS Direct menu.

WANNA WIRE?

If you're a BBS operator or are considering becoming an Internet access reseller, Concentric offers some pretty good deals on high-speed dedicated lines. At press time, you could get a 56Kb line for **$595** a month or a T1 connection for **$1395**, plus equipment setup fees.

Concentric has also forged an alliance with Galacticomm, maker of the Worldgroup software which provides "plug & play" Internet connectivity. "Sysops around the country want a quick, easy way to connect their BBSs to the Internet," says Concentric's CEO Hank Nothhaft. "At Concentric, we have the network to provide that access, while Galacticomm's new Worldgroup software helps system operators get their boards hooked to the Internet quickly."

HEY YOU WITH THE TIE

Nothhaft is no newcomer to the world of telecommunications. Nothhaft, 51, is a 25-year telecom veteran who has held executive positions at DSC Communications and GTE Telenet. Prior to joining Concentric in May 1995, he was president and CEO of David Systems. He was also one of the few guys at ONE BBSCON wearing a tie.



Henry Nothhaft, CEO & President of Concentric Research Corp.

I met with Hank at the 'CON and was impressed by his grasp of the technical. His talk of frame-relay technology and low-latency networks convinced me that he was every bit as sharp as the blue-jeans wearers on the show floor. He's also a nice guy with big plans to move Concentric into a leadership position in the network services business.

On the heels of the expansion of their dialup network, Concentric is moving ahead with plans to further upgrade in the areas of speed and technology. A network-wide upgrade from 14.4 to 28.8Kbps was scheduled for completion in October and they are also planning widespread deployment of ATM and ISDN capabilities by early 1996.

"The breadth of our network coverage in the top 150 U.S. metropolitan markets will solidify our position as the leading provider of low-cost access to the Internet and other online services," Nothhaft said. "We have a proven model that we use to determine where we should develop new POPs and when we should add ports to existing POPs. With this expansion, our network access will be comparable to the dialup networks used by the other major online service providers in the United States."

With their stated goal of being "faster, better and less expensive" and a recent cash infusion from Kleiner Perkins Caufield & Byers and GS Capital Partners (a Goldman Sachs affiliate), Concentric is a force to be reckoned with in the networking arena. ◆

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Concentric Web Page: http://www.cris.com



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CONSUMMATE WINSOCK APPS

by Forrest Stroud

The applications reviewed here and many more are available on Stroud's Consummate Winsock Apps List, **http://cwapps.texas.net** and **http://cws.wilmington.net**

Forrest H. Stroud is a senior at The University of Texas at Austin. He is currently pursuing a degree and career in Information Systems and Data Communications Management. Stroud can be reached at **mailto:Neuroses@mail.utexas.edu**

Another year of school has started for me, and with the new semester comes many changes in the winsock apps industry. Most of these changes are courtesy of Windows 95 — PC users are finally seeing 32-bit applications being developed en masse. The release of Windows 95 has also helped to bring the future of the World Wide Web to the desktop. The two hottest prospects for the evolution of the web are VRML (Virtual Reality Modeling Language) and the Java language, which supports executable applets within HTML documents. The web browser battle is also heating up with a new entrant from Microsoft. It will be extremely interesting to see how the current developers of browsers react to VRML and the Java language, as well as to Microsoft's new browser. You can try out pre-release versions of the newest technology in clients like Internet Explorer, WebSpace and HotJava. Previously only available for high-end UNIX machines, both WebSpace and HotJava are finally available for Windows 95 users as well.

The obvious question is, how will Netscape react to the recent changes in the web industry? In addition to offering future support for the Java language, Netscape has also released two new auxiliary apps, SmartMarks and Netscape Chat, to help in retaining its market share and immense popularity. Whether it will be enough to best Microsoft's Internet Explorer and other web browsers remains to be seen. Look for dramatic improvements in Netscape and Internet Explorer over the next few months, as well as in VRML browsers and the HotJava browser. With all the changes taking place so rapidly, it's going to be extremely interesting and perhaps a bit confusing, too. Thanks to The Consummate Winsock Apps List and its companion mailing list, The Critical Applications Distribution List (CADL), all the help you need to stay current is just a click away. For more information on both The CWSApps List and CADL, check out the primary site in Texas at **http://cwsapps.texas.net** or the secondary site in North Carolina at **http://cws.wilmington.net**. Bon appetit!

HOTJAVA FOR WINDOWS 95/NT

Welcome to the future of the web...according to Sun Microsystems, that is. HotJava is an extremely interesting new browser that goes one step beyond your typical web browser (like Netscape or Internet Explorer). In addition to allowing clients to download the normal fare of images, documents, sounds, etc., distributed "applets" can also be downloaded. Applets are (usually) small executable programs written in the Java programming language and included in HTML pages, similar to commonly embedded images. Applets can take the form of almost anything, from simple games and animations to the most complex of programs. You can even develop and add your own applets to your web site. The potential for this technology is almost limitless; already the sample applets available far exceed anything ever encountered on the web before.

HotJava

Desc:	The future of the 'web now available in alpha release
Pros:	Distributed, executable applets courtesy of the Java language
Cons:	Slow, buggy, and lacking in many critical features, especially relative to other web browsers
Location:	**ftp://java.sun.com/pub/**
Filename:	**hotjava???.exe**
Status:	Freeware
Company:	Sun Microsystems, Inc.

Sun has developed an amazing language in Java, but the actual browser, HotJava, is nowhere near as "hot." As a web browser, HotJava isn't likely to win over many followers. It's far slower than Netscape and other browsers, lacks many of the advanced features found in Netscape and Internet Explorer, and it's still quite buggy. While the Java technology may well be the future of the web, the HotJava browser may not be the best web browser to deliver it. Netscape will include Java technology in a future version — when this happens, look for Java to really take the Net by storm.

WEBSPACE FOR WINDOWS 95/NT

The beta for WebSpace has finally arrived for Windows 95 and Windows NT. This is a very cool client and will likely become extremely popular as the Virtual Reality Modeling Language (VRML) evolves; however, the current release is quite buggy and limited by the small number of VRML worlds currently available. What was previously only available for high-end Silicon Graphics, Inc. (SGI) machines is now accessible on everyone's desktop computer (if you're using Windows 95 or NT that is) and is quite easy to use. WebSpace isn't going to take the Net by storm

overnight, but it very well could become the next killer app and is definitely worthy of considerable attention.



WEBSPACE

Desc:	The first VRML browser for Windows 95 and Windows NT
Pros:	VRML browsing for Windows 95 and NT, Open Inventor for VRML software development
Cons:	Still quite buggy, few VRML worlds currently available
Location:	**ftp://ftp.sd.tgs.com/pub/template/OpenInventor/Windows/**
Filename:	**oiv_demo_intel_win32.exe**
Status:	Demo release part of the Open Inventor SDK package
Company:	Silicon Graphics, Inc. and Template Graphics Software

WebSpace is part of The Open Inventor package which not only allows users to browse VRML worlds but also offers apps for creating and maintaining your own worlds. Several clients are included in this package — SceneViewer for direct manipulation of scene objects and worlds; Inventor Wizard for modifying Microsoft AppWizard source code in order to create a skeleton Open Inventor app; SceneViewer OCX for providing an OLE control wrapper for the Open Inventor SceneViewer app; and two limited games, SlotCar and Maze, for demonstrating the possibilities of virtual worlds. The WebSpace browser also comes with several built-in VRML worlds for exploring; in addition, WebSpace works with Netscape and other web browsers as an external application for ***.wrl** VRML worlds.

The VRML worlds are quite limited in nature right now, but they do provide some amount of insight into what can be expected and anticipated as the language evolves. I recommend checking out The House of Immersion (available as the local file urlhouse.wrl or **http://nemo.ncsl.nist.gov/~sressler/projects/vrml/urlHouseCol.wrl**) with WebSpace for an idea of the possibilities with VRML and for a preview of how HTML and VRML will likely merge. Regardless of the current status of the language, the possibilities are indeed quite limitless for WebSpace and VRML.

INTERNET EXPLORER FOR WINDOWS 95

The folks at Netscape Communications Corporation (NCC), the developers of Netscape Navigator, are more than a little worried right now, and for good reason. Microsoft's latest creation is an excellent web browser that, while not quite as good as Netscape Navigator yet, is bound to make more than a few waves in the Net community. The first thing you're going to notice about Internet Explorer is its speed — this is by far the quickest web browser I've used to date. Part of this is a result of Internet Explorer's method of handling HTML documents; like NCSA Mosaic, it first shows all the text before loading any images. This makes Internet Explorer appear faster than Netscape; in addition, Internet Explorer overall is flat-out faster than both NCSA Mosaic and Netscape Navigator.

Internet Explorer also offers a few exclusive features not currently found in other browsers, including extended tags for the **<FONT>**; attribute, global font sizing, and client-side image mapping — a feature that really needs to be implemented in Netscape and Mosaic. Many other features are also standard fare for Internet Explorer, including centering, transparent images, mailto and ftp support (though not nearly as strong as Netscape), and basic tables.

Unfortunately, Internet Explorer still lacks many features that are necessary for it to be considered in Netscape's league...for now, that is. These include multiple windows (spawned processes); height, width, rowspan, and colspan tags (especially in tables); improved ftp and tables support; an integrated newsreader; a separate process for saving files (as in Netscape); and an advanced options menu for configuring Internet Explorer. Overall, the initial release of Internet Explorer from Microsoft offers a lot but will leave many users wanting more. Netscape has no reason to fear *this* release of Internet Explorer, but I wouldn't be surprised if the tables turn in the next several months.

INTERNET EXPLORER

Microsoft®

Desc:	Microsoft's new web browser — serious competition to Netscape
Pros:	Extremely quick browser, client-side image mapping, global font characteristics
Cons:	Lacks many critical features, including advanced ftp, news, and tables support
Location:	**http://www.windows.microsoft.com/windows/iexplorer.htm**
Filename:	**msie??.exe**
Status:	Freeware
Company:	Microsoft, Inc.

NETSCAPE CHAT

The recent release of Microsoft's Internet Explorer apparently has Netscape Communications Corporation (NCC) more than a little worried. After an amazingly successful IPO and with a current estimated market share of 80%, NCC and its extremely popular Netscape Navigator web browser have dominated an increasingly important area of the Internet with little concern for competition...until now that is. The coinciding release, integration, and onslaught of Windows 95, the Microsoft Network, and Internet Explorer means trouble for many of Microsoft's competitors, especially NCC and online services. Out of this scenario

NETSCAPE CHAT

Desc:	Netscape's IRC program for use with Netscape Navigator
Pros:	Web document sharing, multiple chat communication modes, integration with Netscape
Cons:	mIRC and WS-IRC offer more features and are easier to use
Location:	**ftp://ftp1.netscape.com/pub/chat/**
Filename:	**nc?????.exe**
Status:	Freeware
Company:	Netscape Communications Corporation

comes NCC's latest attempt at ensuring that the Netscape Navigator browser remains the most popular web browser on the market. NCC has developed and released to the public two accessory clients that are designed to augment the power of Netscape and to demonstrate the possibilities of integration with the Netscape Navigator. These applications, Netscape Chat and Netscape SmartMarks, are the first commercial clients built upon the Netscape Client Application Programming Interface (NCAPI). I wouldn't be too surprised to see additional apps for Netscape arrive in the near future...hopefully with greatly improved integration as well.

The first of these two new clients, Netscape Chat, is an adequate Internet Relay Client that offers one unique capability — the ability to share web information by enabling users to send and view URLs with other group members. Concurrent and seamless access to a web page means more than just being able to share your favorite URLs with friends; it is likely to be extremely useful for business functions as well, including areas such as corporate training, marketing, public relations, product promotion, customer support, and more. While Netscape Chat will be useful for individual users, the real value will be to corporate users with a critical need to deliver web-related information to many other users. Netscape Chat also offers an array of additional features, including the ability to concurrently reside in multiple groups and three different chat communication modes — personal conversations (one-to-one), group conferences (many-to-many), or auditoriums (one-to-many). Overall, while both WS-IRC or mIRC offer more features and are easier to use, neither will be able to offer the integrated web document sharing capability that Netscape Chat does. It will be interesting to see how this and future clients from Netscape evolve.

NETSCAPE SMARTMARKS

SmartMarks is one of two new releases from Netscape Communications Corporation (the other being Netscape Chat) that give users a preview of the seamless integration with Netscape as promised by the Netscape Client Application Programming Interface (NCAPI). SmartMarks offers many benefits to the serious webulite, including the ability to manage thousands of bookmarks, automatically monitor and track changes in web pages, quickly search common web databases, receive updated bulletins on rapidly changing web sites, and more. In addition, SmartMarks comes pre-installed with the 300 most popular web sites according to the Yahoo! database. Quick and efficient Boolean web searches can be conducted with Infoseek, Lycos, and Web Crawler, as well as Yahoo!, so that even the most elusive and esoteric of topics can be easily found on the web. SmartMarks can also manage your Netscape Navigator bookmarks by automatically loading and seamlessly integrating itself into the Netscape Bookmark menu every time you start Netscape.

NETSCAPE SMARTMARKS

Desc:	An enhanced bookmarking editor and more for Netscape Navigator
Pros:	Efficient bookmark management, web page monitoring, quick searching, and more
Cons:	Sllooowwwww, requires 6 Megs of RAM to perform at all
Location:	**ftp://ftp1.netscape.com/pub/smart/**
Filename	**nsm???.exe**
Status:	Free beta release — expires December 31, 1995
Company:	First Floor, Inc., and Netscape Communications Corporation

One of SmartMarks' most interesting features is its support for the new bulletins HTML tag. Web page designers can code important new information enclosed as bulletins that give users a quick summary of recent changes. With SmartMarks, users can easily track and download bulletins from assorted web pages in order to efficiently discover what's new on the web.

SmartMarks is not without its faults, however. Most importantly, SmartMarks is quite slow, especially on older 486 and 386 computers with 8 MBs of RAM or less (6 MBs of RAM is an absolute minimum for running SmartMarks). This has unfortunately led more than a few users to abandon SmartMarks and its numerous features. Also, it will be far easier for many users to manage their bookmarks from within Netscape rather than having to work with SmartMarks as well. If you do have the necessary hardware and demanding web needs, I definitely recommend SmartMarks — its management of bookmarks, bulletins, and web pages alone is enough to recommend trying it out.

WEBFORMS

WEBFORMS

Desc:	Web form development and processing made easy — without CGI scripting
Pros:	Simple, easy to use interface for creating web forms without advanced scripting
Cons:	Forms Processing can be redundant and time-consuming for many users
Location:	**ftp://ftp.intac.com/pub/intac/users/dversch/programs/**
Filename:	**wbfrm???.zip**
Status:	Shareware - **$19.95.** Professional version available - **$29.95**
Company:	Q & D Software Development

Like many HTML Editors, WebForms presents users with an intuitive and easy to use interface for developing web forms. It then takes this process one step further by also processing the responses from your web forms. You can use these forms for order taking, surveys, comments, suggestions, and more. Responses are received in the form of an e-mail message which then needs to be imported back into WebForms for processing — the responses will often not be readable enough for use with just your e-mail client.

The WebForms Form Generator allows you to develop any type of form, from a simple "comments box" to the most complex combination of scrollable lists, radio boxes, and check boxes. In addition, you can modify the source code after generating the form for even greater flexibility. All of this is done without the need or use of CGI scripting — all you need is an e-mail account to send the form to. In addition, there is extensive online help for introducing users to web forms development and for explaining the multitude of features found in WebForms.

WebForms is a great client to use if you lack access to CGI scripting or lack experience in this area. It works best for

processing surveys, orders, and similar items that usually don't require replies. However, for developing forms that you want to be able to easily reply to, WebForms may not be your best option, especially if you get many responses. This is because every e-mail response must be first saved as a text file, then imported into WebForms for processing, and finally exported back into a text file. This process is both time-consuming and redundant; for this reason you'll likely want to check out the alternatives available. For surveys and orders, however, WebForms may well be your best bet at creating effective, professional-looking forms for your web site.

MARINER

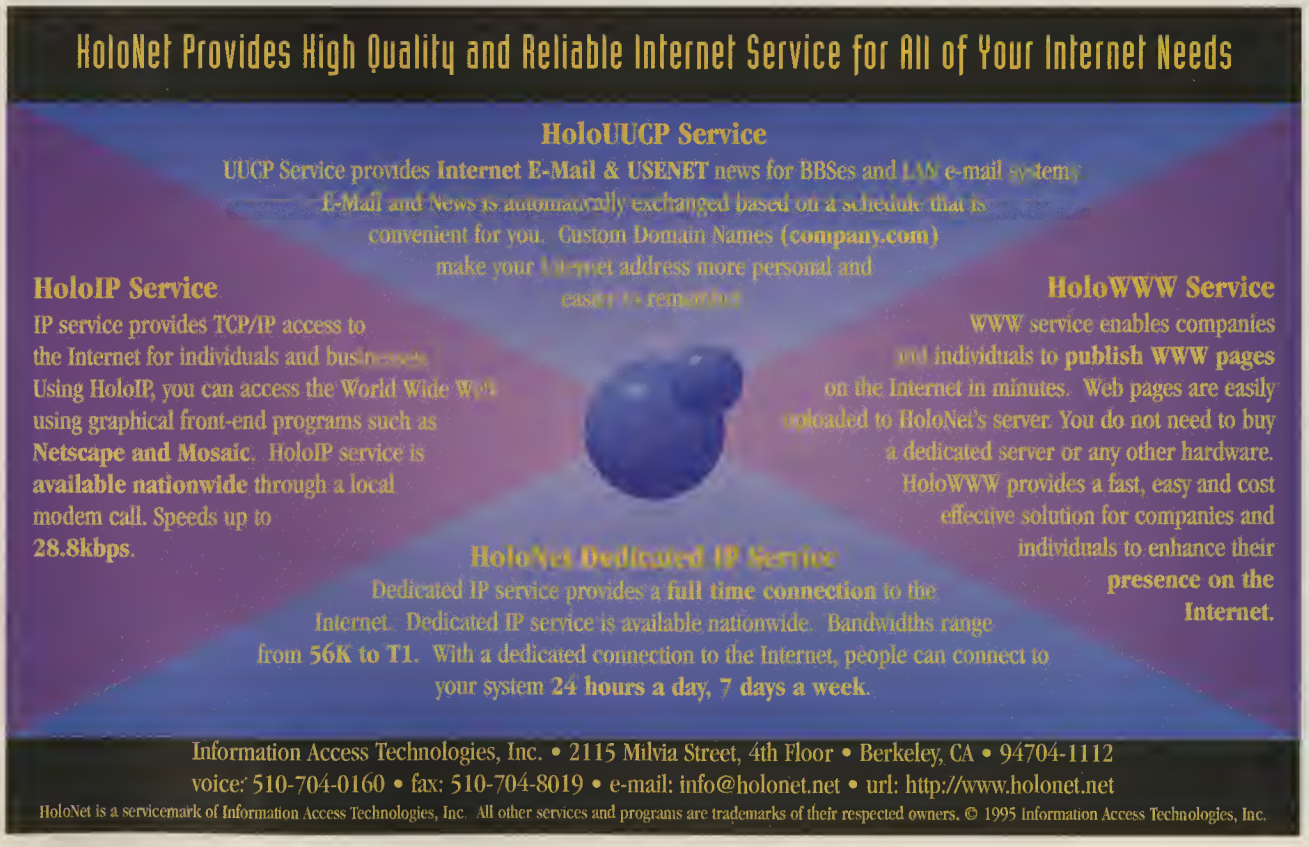
This is the newest Net suite to hit the market, and it does so at a very competitive point in the industry. With apps like Quarterdeck's Internet Toolbox and Wollongong's Emissary battling for position, Mariner may have a difficult time establishing itself. Fortunately, Mariner consists of a good collection of apps that, while not quite as outstanding as some other suites currently available, should interest many users. Mariner's best feature is the *Autopilot*, which is simply an easily accessible menu of your favorite web sites, newsgroups, mail messages, ftp sites, and more. Unfortunately, only one of each item can be loaded at a time (multiple web documents cannot be opened concurrently). In addition to www, ftp, mail, and news services, Mariner also offers chat, telnet, and gopher support.

The web browser is quick and efficient, but it does lack many of the best features found in Netscape, including advanced tables and attributes. Also, as mentioned earlier, only one document can be loaded at a time. The mail and news clients are both satisfactory; however, neither offers the multitude of features found in standalone apps like Pegasus Mail and Agent. The gopher, ftp, telnet, and chat clients are all common fare for Internet applications, not really excelling in any one area. While the interface is quite intuitive and easy to use, the more exotic interfaces of Emissary and Internet Toolbox are likely to garner more attention and admirers.

MARINER

Desc:	A new Net suite of apps with a unique Autopilot feature
Pros:	Solid collection of apps, unique and useful Autopilot feature
Cons:	No single app stands out in terms of features, can't load concurrent documents
Location:	**http://www.mariner.ncd.com/ftp/trial/**
Filename:	**mar_b.exe**
Status:	Free evaluation
Company:	Network Computing Devices

The Autopilot is the one feature that keeps Mariner from being just another average Net suite. With this registry of information you can easily organize and manage your favorite sites to visit without the need to load separate clients for the specific task at hand. While I definitely like this approach, I think Netscape has already implemented it better with SmartMarks. Overall, I like the approach that NCD has taken with Mariner and its autopilot feature; whether or not this client can compete in the suddenly congested Net suite market remains to be seen. ◆



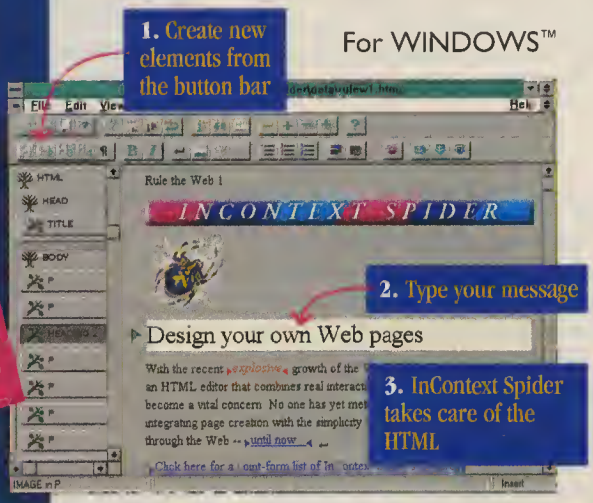
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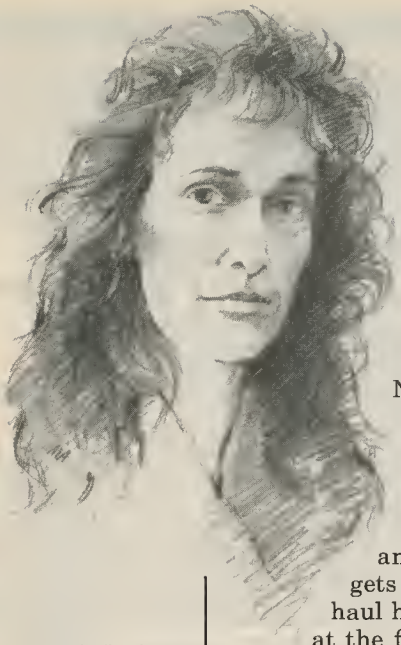
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PEOPLE ONLINE

by Phyllis Phlegar

THE WRITE STUFF

Picture it: early 60's Brooklyn College, in the Barnes and Noble bookstore. My mother handed a check for $5 to the clerk at the cash register. Minutes later, two large security men appear at either side of Mom, informing her that they've just called the bank and her check is no good! My mom gets scared; she thinks they're going to haul her off to jail! She looks at the clerk at the front counter and assures him that she just made a deposit and her check is good, as always. The clerk knows she's a good customer and assures the security men that there must be some mistake! Then the clerk calls the bank, and sure enough, my mother's check was good. She was very relieved and went on to continue shopping at Barnes and Noble for school books.

Fast forward thirty years, to a Barnes and Noble bookstore on the other side of the Mississippi. It's "Single Booklover's Night" and I've been invited to give a talk and demonstration about meeting friends, lovers and possibly mates online, and to sign my book ***Love Online***.

I wanted to be able to answer questions about other books written by folks who, like me, are online because of the people and social cyber-circles. With all the media hype about sex online, I looked for titles that seemed to indicate they would be dripping with sleazy stories and titillating information; ***net.sex*** and ***Erotic Connections*** fit the bill.

net.sex
by Nancy Tamosaitis
1995, Ziff-Davis Press
(800)688-0448
$14.95, 175 pages paperback
ISBN 1-56276-285-0

Nancy Tamosaitis' other books include ***net.talk*** and co-authoring ***The Joy Of Cybersex***. Chapter One of ***net.sex***, "Where Is The Love," begins with an interesting discussion with many questions about sex and the Internet — but no answers.



The next chapter discusses, at length, the results of a national on line survey of sexual knowledge. Tamosaitis borrowed the Kinsey Institute's National Sex Knowledge Test and added five questions of her own about online sexual activity such as "hot" chats. Some 4,000 tests were disseminated online to random Internet e-mail addresses taken from the Internet Yellow Pages book. There were 739 respondents and they did quite well, often better than the offline population at large. The complete test and results are contained in this chapter.

Chapter Three, "Whose Cyberspace Is It Anyway," fed my craving to analyze the stuff people do online, why they do it and who they are. Wow! Tamosaitis defines the purpose of the chapter by saying "This chapter explores many facets of the ethical, moral, and legal issues surrounding sex-related activities on the Internet through anecdotal experiences and via the voices of experienced Internet navigators."

Those navigators include a fellow whose angry tirade about some women's apparently shallow search for a "macho" type of mate got the attention of, and eventually won him his "Ms. Right." Then there's the wife who decides to get back at her cheating husband by having online affairs. Another story chronicles the escapades of a fellow who I'd actually met online while I was doing research for a story on cyber-adultery. Frankly, the way he's described in ***net.sex*** is much more interesting than I found him to be when we talked briefly, and I do mean briefly. His first question to me was "m or f?" and as far as I was concerned, that didn't bode well for scintillating chat.

Chapter Four, "A Tour Through The USENET's Red-Light District," gives the reader an inside look at what is discussed in a good cross-section of adult, or sexually oriented newsgroups. It's a real time-saver for folks who want to know what is out there but don't want to take the time or trouble just for curiosity's sake. It is also good if you are looking for such a newsgroup.

For Tamosaitis, researching this chapter was understandably

Phyllis Phlegar is a graduate of the University of North Carolina at Chapel Hill, and also holds a private pilot's license. She is a freelance announcer and her work can be heard on Business Radio Network, National Public Radio and the Armed Forces Radio Network. Phyllis' book *Love Online* is now available from Addison Wesley Publishing Company.

Write to Phyllis, at `XHBG67A` on Prodigy, `P.Phlegar` on GEnie, `Phlegar` on Delphi, `P Phlegar` on AOL, `71562,407` on CompuServe or at `phyllis@cris.com` on the Internet.

mind-boggling; better her than me! She talks about a dream she had, where "all the party guests hid behind ornate masks, drank truth serum in place of wine, and proceeded to reveal their deepest, darkest, innermost fantasies and desires... I arose, and realized the dream was a metaphor for my months spent poring over the posts on USENET's adult side."

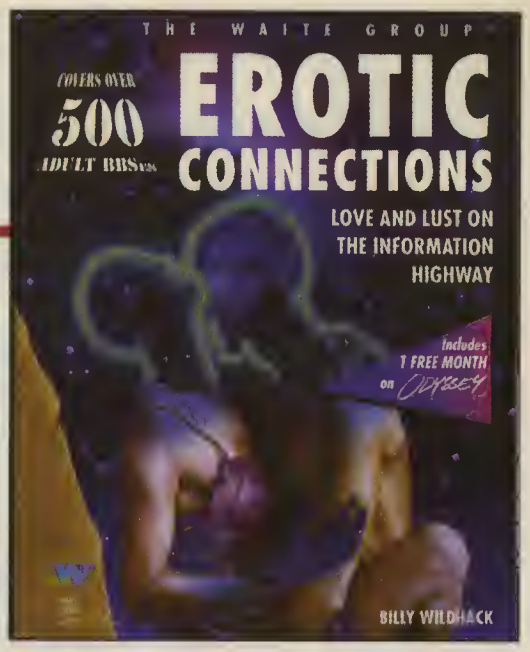
The author does not specifically mention any newsgroups that she personally found interesting or intriguing. I thought they were all interesting at the very least, especially `alt.society.underwear`. Discussions abound as to whether or not undies are simply underclothing or a key to one's sexuality. There are also historical discussions about underwear through the ages, who wore what and why. This newsgroup appealed to my fashion sense (or lack of it).

One newsgroup had the word "diapers" in it, and being a new mother, I took a closer look, thinking it might be a group of parents discussing the pros and cons of cotton versus disposable. It apparently is not, as the newsgroup's full name is `alt.sex.fetish.diapers`.

Some newsgroups were downright scary, like those addressing issues involving adults having sexual relations with children. In her summation of this extensive chapter, Tamosaitis touched on the availability of these newsgroups by saying in part, "One doesn't become a pedophile by reading about pedophiles, but the knowledge gained by learning about their rationale is invaluable. Knowledge is power, and the power to protect a child may come from understanding what makes a pedophile tick."

Chapter Five, "The World's Largest Digital Party Line" and Chapter Six, "Are MUDs Dirty or the Best Clean Entertainment in Cybertown," are romps through the more social, lighthearted and fun stuff going on in cyberspace. I learned a lot of new definitions, including "tinysex." At first, the word reminded me of a shy-in-the-shorts guy I dated aeons ago, but ***net.sex*** defines it as "libidinous, heated MUD banter and actions which replicate sexual intercourse."

The Epilogue of ***net.sex*** focuses on a few do's and don'ts, including reasons why there needs to be respect for people online. There is a lot of good information for the newbie, much of which might keep them out of trouble! I found most of the book invaluable to the novice, and informative for the maven who hasn't had the time or desire to do such an extensive review of the net-accessible red light district.



Erotic Connections
by Billy Wildhack
1994, Waite Group Press
(800)788-3123
$24.95, 258 pages paperback
ISBN 1-878739-78-6

This book was even more of a surprise than ***net.sex***. It sounds like a sleazy take on cyberspace, and the cover seems to support this opinion. Instead, it's quite informative.

Erotic Connections was obviously written by a man. In the first chapter, Part One, "Boot Up, Log On, Get It On," Wildhack describes the material available on many of the adult BBSs, and says this is "where you can find a lifetime of stroke material." He also gives advice, such as don't reveal personal information until you get to know someone rather well. He suggests that before you go online, find out what your x-rated trip through cyberspace will cost, learn what to do and not to do to stay out of trouble legally, and when to keep personal information to yourself.

Chapter Two, "Making It Online," was a solid, down-to-earth description of how to get there from here; from purchasing a modem to subscribing to the adult BBS of your choice. Chapter Four, "Grabbing Files," and Chapter Five, "He Said, She Said," contained good solid advice on the more technical end of BBSing. I myself do not profess to being especially "techy," so I also had my favorite computer geek (my husband) take a good look at chapters Two and Four. He allowed that they were well-written and easy to follow.

Chapter Three, "Chatting Hot And Cool," had good information about BBS commands (I learned a few things myself). When I first went BBSing, I flew by the seat of my pants but I don't suggest that the newbie try it. Instead, they'd do themselves a big favor by reading this chapter and then keeping it close at hand while online.

Wildhack obviously enjoys live chatting, commenting that "when you're seducing a caller with whispers while chatting with others about the weather and at the same time discussing a movie with someone who is somewhere else entirely in the system, you know what it must feel like to be telepathic." His advice is good too, saying how "honesty is definitely the best policy" if you're looking for friends or someone special. I agree with his assessment of how men should approach women online: "Remarks that would be inappropriate offline are generally a bad idea online as well."

Wildhack describes Part Two, "Featured Boards" as a section that takes a close look at some adult BBSs. There's a wealth of information on some 100 different BBSs, all laid out in an easy to follow format. If you're of a mind to cruise the adult hangouts in cyberspace and you can't find something you like from this list, then perhaps you need to start your own bulletin board.

Part Three of Erotic Connections was another daunting accomplishment, a worldwide BBS directory. Did you know that there is an adult BBS in Slovenia? It's the ABM-BBS at **+3861-218-663**.

I'd have loved to dismiss these books and tell you to buy mine instead, but I enjoyed reading ***net.sex*** and ***Erotic Connections***. What surprised me the most was that both books were less provocative than my pristine-looking and carefully worded ***Love Online***! Take note, though, that all three books are completely different and really don't compete with each other.

Say, I hear that a book called ***Throbbing Modems*** is out now. I can't wait to read that and find out what it's really about. ◆

NEW HELP FOR THE HAVE-NOTS



The Bureau of Missing Socks is a quasi-government organization dealing with the mysterious disappearance of single socks. Funded by cuts in the defense, health, education and welfare budgets, it is charged with solving this age-old mystery. It explores all aspects of the phenomena including the occult, conspiracy theories, and extra-terrestrials. The bureau is currently conducting an online survey through its web site at **http://jagat.com/joel/socks.html** to compile a profile of socks lost over the last twenty years. Orlando Brown, the Bureau's Director, warns that " We cannot afford to become a divided society of 'socked' and 'sockless' citizens."

The Online Museum of the Sock includes the world's smallest sock, a talking sock and other historically significant and merely strange socks. Visitors to the site can register their missing socks or search the Bureau's database for a match to a single sock, meet other missing sock theorists in a discussion forum, read the latest copy of "Sock News," and sock it rich with the bureau's grand pyramid scheme. There is also a new literary section containing online works dealing solely with missing socks. The recently re-discovered Charlie Chan classic, " The Case of the Purloined Sock," is this month's feature. The Bureau is also sponsoring the sock and roll festival " Woodsock - 1996."

*[Thanks to Joel M. Reed – **mailto:jreed@jagat.com** – for this timely tidbit. – Ed.]*

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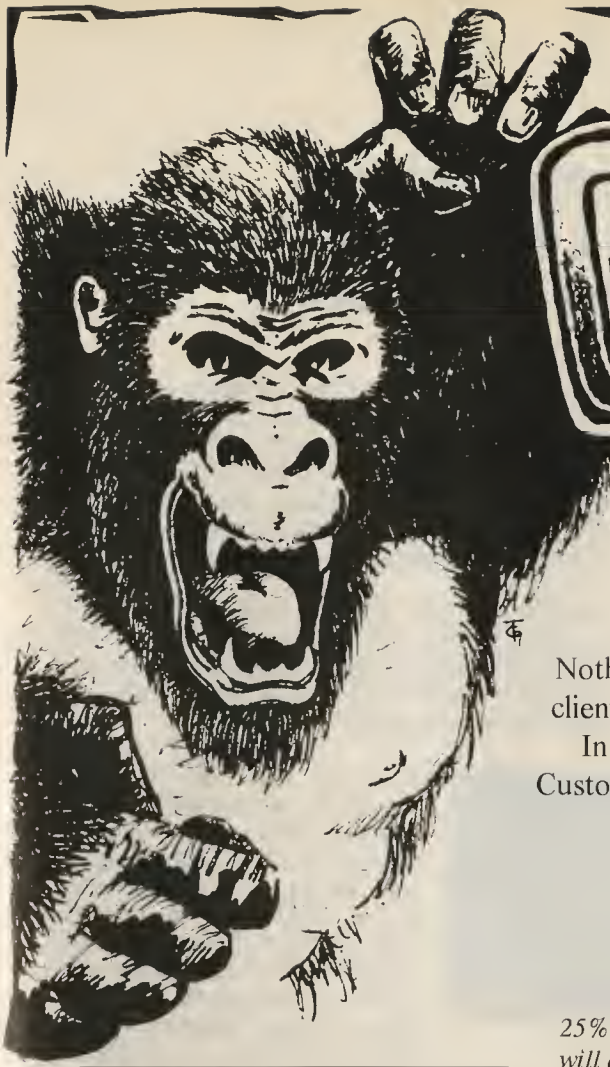
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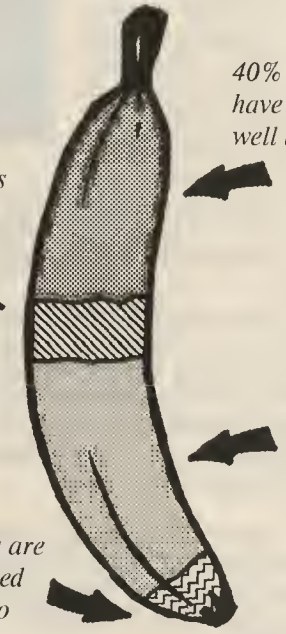
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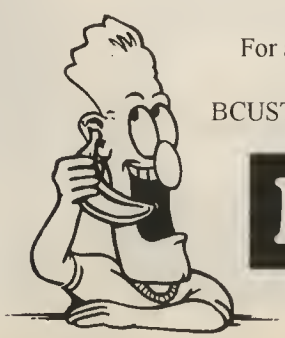
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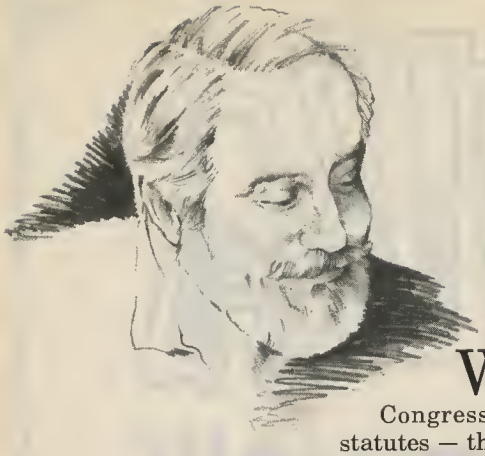
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GOVERNMENT ACCESS

by Jim Warren

PARTICIPATING IN THE HIDDEN LEGISLATURES

We all know about our elected state legislatures and federal Congress, and that they pass laws — statutes — that govern us.

But there is another set of legislative organizations — entirely unelected and almost completely unremovable by citizen action (short of mob lynchings, considered real uncool) — that actually promulgate most of the regulations that are imposed upon us. These are legislative bodies of which we are usually almost entirely unaware. They are the administrative agencies in the Executive Branch of local, state and federal government.

Administrative agencies create, modify, impose and enforce what are actually the vast majority of the "laws" that regulate almost all aspects of our lives — often including the imposition and collection of fines, without the inconvenience of any of those silly old court trials, juries of peers or presumption of innocence. They make and enforce the laws, and collect the penalties — that often remain in their own agency's coffers. Yet none of these people is elected and none can be removed by the body politic.

> ***"administrative agencies, increasingly, have become legislators, jurors and executioners unto themselves"***

There are ever-escalating instances of career bureaucrats "rationing" the information that they deign to give to their elected and appointed supervisors, and flat-out refusal to provide information requested by state and federal legislators, and by legislative or congressional committees — sometimes refusing to provide such information for years.

Increasingly, agencies are claiming "executive privilege" and "separation of powers" to refuse to provide our elected legislators with requested information, much less "permit" legislative oversight except by legislation.

If this makes you nervous, it should — because the administrative agencies, increasingly, have become legislators, jurors and executioners unto themselves. The more notorious agencies include:

- CIA (Central Intelligence Agency — think Alderidge Ames, Iran-Contra and decades of unpunished drug-running)
- ATF (Bureau of Alcohol, Tobacco and Firearms — think Waco children's cookout, Ruby Ridge, Randy Weaver's 14-year old pre-pubescent shot-in-the-back son and baby-in-arms shot-in-the-head wife,)
- FBI (Federal Bureau of Investigation — think the new national wiretap system, the Clipper Chip mess, the proposal to prohibit all crypto except when they hold the keys; think J. Edgar Hoover, wiretaps on sitting Presidents, dozens of file cabinets of blackmail[?] files on national leaders that were destroyed upon Hoover's death)
- and of course, the IRS (Internal Revenue Service — think guilty until proven innocent, costly demands, inconsistent enforcement, Lyndon Johnson's exploitation against political enemies, and your own examples)

But you can also think of unending, sometimes baroque and Byzantine regulations of everything from driving, parking, noise, pets, lawn care, house-paint color, home business, barbers, beauticians and beach hours, to park trails, street maintenance, school hours, window height and number of bedrooms. And much, much, much more, ad nauseam.

Career bureaucrats can get away with this independence of effective oversight and control by our elected and appointed representatives for a variety of reasons:

- They know more than our representatives. They are the experts and our elected reps are ignorant amateurs, generally dependent upon bureaucrats for expertise — and to keep from looking as ignorant of agency operations as they often are.
- Our elected politicians are notoriously inclined to slide around hard choices and controversial decisions. More often than not, they address them by passing ambiguous, vague statutes that effectively authorize and mandate that those faceless, unelected bureaucrats in the agencies are to face the real problems, make the hard choices and impose the undesirable regulations. Which is all part of why most elected officials usually back their bureaucrats against citizen complaints, or make only ineffective efforts to correct systemic problems. Otherwise, the bureaucrats will find ways to toss the controversy back in the laps of the elected "decision-makers."
- The elected politicians are too-often more interested in looking good than in providing effective representation of the public's well-being (whatever

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Warren [345 Swett Rd., Woodside CA 94062; mailto:jwarren@well.com] works on technology-related civil liberties and open-government advocacy, and currently serves on the California Secretary of State's Electronic Filings Advisory Panel.

Warren has received the Dvorak Lifetime Achievement Award (1995), the Hugh M. Hefner First-Amendment Award (1994), the James Madison Freedom-of-Information (1994) for his efforts to open online access to government, and the Electronic Frontier Foundation's Pioneer Award (1992). He founded InfoWorld and the Computers, Freedom & Privacy conferences (1991); was founding host of PBS television's "Computer Chronicles" (1981) and founding Editor of **Dr. Dobb's Journal of Computing** (1976).

that is; opinions vary). Astute, effective oversight requires extensive time and effort — hard to squeeze in between political pontifications, candidate dinners and egotistical feuds with opposing politicos.

- Successful bureaucrats and senior administrators are invariably talented at making those who are elected to positions that oversee their agencies look good to the minority of the opinion-makers who "count."

- They are equally talented at playing the petty, feuding politicians off against one another — which turns out to be fairly easy, given their massive egos and general lack of expertise in agency operations.

Usually, most regulatory policies and enforcement work reasonably well, explicitly because — surprise! — most career bureaucrats and most civil servants really are civil, really do provide service, and really desire to benefit the public well-being.

In the minority of instances when problems arise, it is usually when these unelected, government-empowered officials use their positions to implement their own agendas, rather than those desired by or benefiting the public (and one of the most serious adverse agendas is protecting and expanding their own jobs and their own authority).

So what can be done? (And why is this rant appearing in ***BoardWatch Magazine*** in the first place?)

OVERSEEING POLICY CREATION

It is as important that citizens and civic organizations monitor and participate in these REGULATORY policy decisions, as it is crucial that we monitor and participate in the LEGISLATIVE decisions by our elected representatives.

Much more often, it is special-interest businesses that are most attentive to those regulatory processes — often funding full-time lobbyists and lawyers to do exactly the same kind of hustling of bureaucrats and regulatory policy-makers, as congressional lobbyists hustle our congress-critters.

This means citizens and community groups must have timely, complete access to DRAFT regulations, from their first drafts through their final, adopted versions.

It also means that citizens and organizations must have robust opportunity to fairly and fully participate in all of the hearings that usually precede adoption or amendment of such "administrative codes and regulations" — "ACRs" as they are sometimes called.

Civic nets, local BBSs and the public computer nets can be invaluable for these purposes — if the agencies will cooperate. They need to:

- Make ALL drafts of ALL proposed regulations — from the first, tentative version, onward — available on the nets. This needs pro-active effort by both agency officials, citizen advocates and net activists.

- Facilitate and encourage public input and testimony by electronic mail — especially since most agencies conduct most "public" hearings during regular business hours, when most citizens are working. (Small wonder that those who are most effectively represented in most agency hearings are those who can afford to pay some lawyer or lobbyist to attend!)

- Implement online public hearings of each regulatory agency, that are just as extensive and substantive as the face-to-face hearings — for the wee small minority of the public who can afford to attend them.

Such online presentations should have guidelines that limit the length and number of comments that any individual can make, just as presenters in public hearings are typically limited to a specified amount of time. But they should also allow parallel forums in which additional information can be submitted, comparable to the documents that are submitted in addition to verbal testimony at face-to-face public hearings.

Such online hearings should be open for limited periods of time, but such periods should be at least days — or perhaps weeks long — rather than only the few hours that are typical of most face-to-face regulatory hearings.

Of course, the paid lobbyists and lawyers who have been so cozy with the regulatory process for so long, who have made such handsome loot therefrom, are not going to be deeply enchanted with this new openness — where citizens and groups that do not have a profit to protect will have enhanced access.

OVERSEEING ENFORCEMENT

It is equally important that we monitor the ENFORCEMENT of the ACRs by the agencies that are charged with enforcing them, once enacted or adopted.

This requires that agencies provide public access to as much of the operational and administrative statistics and records as possible. Again, local BBSs and civic nets, and the global public nets can be invaluable in such access — at minimal cost with a massive improvement in availability.

ALL such records that are computerized within an agency should certainly be considered for such online disclosure and complete, timely public access.

However, this will raise issues concerning protection of personal privacy and business confidentiality.

MAJOR ATTITUDE ADJUSTMENTS

Both citizens and public officials will have to undergo significant attitude adjustments that — like the closely-related, current flattening of corporate hierarchies — will almost be generational in their slowness:

Citizens must become more tolerant of bureaucratic imperfections. Because, as these policy-making and enforcement practices are opened to increasing and timely public oversight, it will become apparent that civil servants are just as human — and error-prone — as are their overseers and subjects.

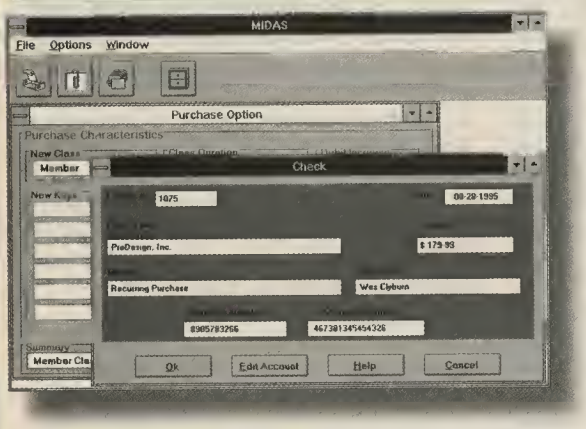
Bureaucrats will have to accept a reduced level of control that is inherent in permitting more active public participation in their policy-making and enforcement practices. Often, agencies have kept all early versions of policy drafts as secret as possible, and done the same with their internal operational reports and statistics.

But the United States is, after all, supposed to be a government of the People, by the People and for the People — and government officials have an ethical responsibility to honor that high principle, just as we, the People, must exercise our power over our government in a restrained, responsible manner.

Like earlier democratic movements, this one IS going to happen. Let's get on with it. ◆

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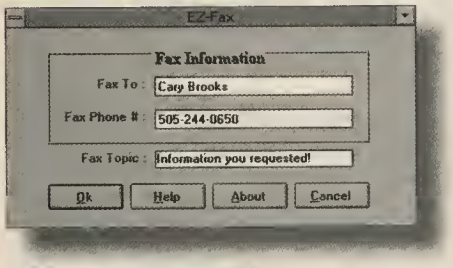
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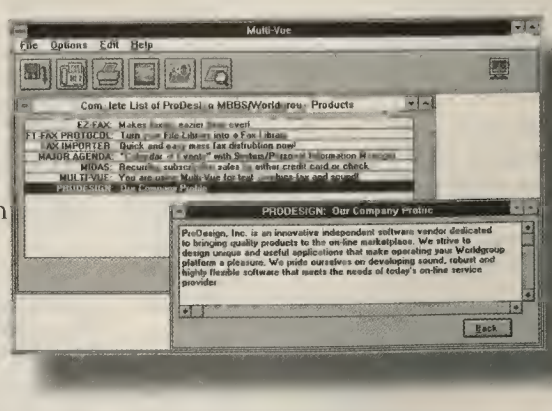
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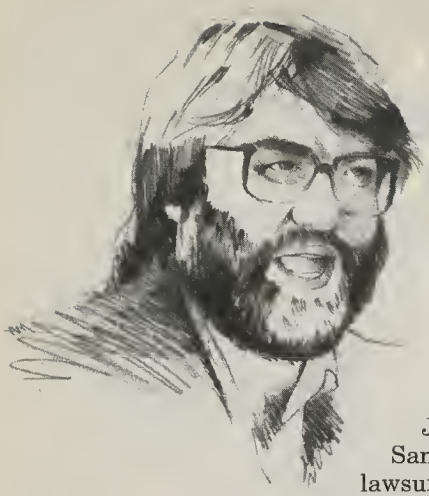
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LEGALLY ONLINE

by Lance Rose, Esq.

CONSUMER PROTECTION OR SHAKEDOWN? THE CLASS ACTION SUIT AGAINST AMERICA ONLINE

America Online was hit with a class action last July, in the California state court in San Francisco. This was a new kind of lawsuit for the online world, and at first, it was hard to figure out what it meant. Was it a new sign that online systems have "arrived," and are now subject to the same parade of endless lawsuits afflicting all big companies? Or did it mean that large online systems, new as they are in our society, have already become so oppressive that consumers must band together to beat them back in court? After a close look at the complaint in the case, *Hagen v. America Online*, a third possibility emerges: has AOL's success and growing wealth made it into a ripe target for opportunistic lawyers and nearly groundless strike suits?

Lance Rose, Esq. is Of Counsel to Lewis and Roca in Phoenix, AZ, and Co-chair of its Intellectual Property and Technology Group. He can be found on the Internet at **mailto:** elrose@well.com and on Compuserve at 72230,2044. He is also author of ***NetLaw***, the online legal guide, published by Osborne/McGraw-Hill and available at better book stores everywhere.

"Individual AOL users might get awarded damages of two bits a head... , but the lawyers... could rake in hundreds of thousands of dollars"

The complaint was drafted by California attorneys Brian Newcomb, Eric Wright and Stephen Hagen, and it is a dramatic masterpiece. It starts out by describing AOL's billing practices in hushed tones. For **$9.95** a month, customers can spend up to 5 hours on the system. Additional time each month is billed at **$2.95** per hour. No problem so far. But then, the awful truth is revealed: if a customer's session extends one or more seconds beyond an exact number of minutes, his connect time is rounded up to the next minute on his monthly bill. This could lead to an overcharge of up to **five cents** for each session past the initial 5 hours every month. Even worse, each session is tallied separately. As the horrified lawyers put it, "after using up the 'free time,' a member billed for ten sessions of six minutes duration each (totaling 60 minutes) would be billed for **$3.00** (10 x $.30/session) rather than **$2.95**."

But that's not the end of the evils claimed to lurk in AOL's billing practices. According to our complaining lawyers, "[AOL] represented that a member would be billed for the time he or she used the AOL service and that the time spent in 'free' areas would not be charged to a member. . . . The representations made by [AOL] were in fact false. The true facts were that America Online would bill for any time over a minute by rounding up to the next minute and that some of the time spent in 'free' areas would be charged to the member." Here, then, is the devil at work: when AOL bills an additional few pennies to its members by rounding up their seconds online, those pennies are not only an extra charge for paid use of AOL; they are at the same time a wrongful charge for use of the areas designated as "free" by AOL. From the single act of overcharging identified by the plaintiffs apparently can arise two separate sins.

But wait — the multiplicity of evils caused by AOL rounding up those seconds does not end there. The litany of claimed AOL violations includes breach of contract, fraud, violating consumer protection laws, and deceptive trade practices. Make no mistake about the plaintiffs' personal opinions of AOL and its managers, either: those scoundrels stand accused of "despicable conduct," subjecting the complaining lawyers to a "cruel and unjust hardship," and "conscience [sic] disregard of Plaintiff's rights." The plaintiff lawyers finally wind up with: "if Plaintiff had been aware of the existence of the facts not disclosed by [AOL] regarding its billing practices, Plaintiff would not have as he did, become a member of America Online and used the AOL Service..."

Impressive words indeed. But in the end this suit, with all its overcharged histrionics, looks mostly like so much hogwash. For starters, the complaining lawyers admit that AOL warned its members about its rounding practices. They quote AOL as stating, "You will be charged for your extra time on America Online in one-minute increments." They try to style this statement as deceptive ("no explanation or disclosure is provided regarding how the one minute increments are determined"), but in fact, there is little room left for the imagination. If AOL tells its members it charges in one-minute increments, then those members logically will know that AOL either rounds the seconds up to the next full minute, or it rounds them down to the last full minute. AOL's actual choice to round up was, literally, no more deceptive than a choice to round down (putting a couple of pennies into members' pockets) would have been. Since AOL indeed warned its customers about rounding the seconds one way or the other, practically the whole complaint falls apart like a house of cards.

Second, the amounts of overcharging claimed against AOL are pitiful on a member-by-member level. Let's take the complaining lawyers' own example. If an AOL member does six 10-minute sessions adding up to an hour of extra time on AOL for one month, they

will pay **$12.95** ($9.95 plus $3.00), instead of the **$12.90** the lawyers claim he should be paying. That's a measly nickel more (.39% of that $12.90). Are we supposed to believe the plaintiff lawyer would not have signed up to AOL if he knew it would cost $12.95, instead of $12.90?? For the plaintiffs to suggest this is a bigger lie on their part than anything they charge against AOL in their lawsuit.

"Whenever an AOL member's session extends 46 seconds or more past a whole minute, the time gets rounded not to the next whole minute, but the minute after that."

The natural rejoinder is that a single nickel isn't much, but AOL may be hoodwinking its members out of a couple million extra nickels every single month. Over the course of a year, this could add up to a couple of million dollars of undeserved money in AOL's pocket. However, let's retain some perspective, and remember the likely rationale of this class action suit: that the complaining lawyers stand to get a big chunk of any money paid by AOL to settle this case. Individual AOL users might get awarded damages of two bits a head if they're real lucky, but the lawyers pushing this lawsuit could rake in hundreds of thousands of dollars (they could also gain ill-deserved reputations as savvy cyberspace lawyers, to boot). In essence, by starting up a lawsuit against AOL for amassing a small fortune in petty overcharges, these lawyers are lunging for a big share of that same booty.

There is also an irony that this lawsuit for "overcharging" was filed at a time when online service charges to the consumer are in freefall. During the last couple of years, America Online, CompuServe and Prodigy have been in a 3-way battle for early users of online services, dropping their prices to pull away each others' customers. As Microsoft Network, AT&T Interchange, the revamped Delphi/MCI service, and other major players get into the fray, this competition will only get more intense, paring service charges to the bone and beyond. Consumers are paying less and less for more and more. The class action against AOL, alleging some venal scheme to part consumers from their money, looks kind of silly in this context. Even while AOL's supposed scheme to bilk members out of a couple of pennies here and there was in motion, its overall price was dropping in amounts that far exceeded the alleged petty thievery by several orders of magnitude.

That said, remember that we said above that the AOL suit was *nearly* groundless. There was, in fact, one claim that can't be shaken off as readily: whenever an AOL member's session extends 46 seconds or more past a whole minute, the time gets rounded not to the next whole minute, but the minute after that. For instance, 2:46 would get rounded to 4:00 minutes instead of 3:00 minutes. If true, this part of the claim could have some merit. If AOL indeed makes that extra minute jump, it's hard to see how it could be justified. Its warning to members that it bills in one minute increments simply does not imply that an extra whole minute is tacked on at times. Of course, even if this claim is true, it does not mean AOL and its managers are "despicable." It could just be a billing software bug. It would mean, though, that AOL should cough up the extra amounts in refunds or credits against fees to its members, whether the extra-minute billing is mistaken or deliberate. Billing practices should be disclosed to members as a matter of good business. If there was a mistake, members should be made whole.

However, the way that the extra minute claim is presented in the complaint against AOL makes it questionable. It is the only claim that does not look silly on the surface, yet it is not highlighted the way the sillier claims are. It may be that the complaining lawyers do not feel they have good proof of this claim. We'll have to wait and see on this one.

At the time of this writing, AOL has not yet presented its answer to the lawsuit. Likely they will deny the claims of overcharging, and point to their existing notices to members as perfectly adequate warnings of how they will be billed. AOL will probably also raise various defenses traditionally seen in class action lawsuits. These include failure by the plaintiffs to identify or notify the class members adequately; failure by the plaintiffs to show that the members of the injured class all have the same types of injuries or damages; and the claim that the plaintiffs cannot properly represent all the class members against AOL. Such defenses test whether the plaintiff was right to put different peoples' claims together into a class action, or whether it is better for each member of the supposed class to seek his or her own individual remedy in court.

Such traditional defenses have stopped many a class action dead in its tracks. For example, if the asserted class in a given lawsuit comprises people who bought a certain brand of tuna fish, the standard requirements of identifying and notifying class members can be difficult and costly to meet. Members would have to be identified through advertising and other means, and notices would have to be mailed to all of them, at a cost that could run to hundreds of thousands of dollars.

In contrast, these requirements could be easy to satisfy in the case against AOL. Identifying current and past AOL members is no problem, since AOL keeps records on all of them. Notifying them is no problem, either. Simply use e-mail. AOL naturally would chafe at revealing or using its members' identities in this way, or sending out a mass e-mail to its own members about a lawsuit against it. Nonetheless, if a court felt the case was not frivolous, it would readily order AOL to send out a mass notice in e-mail to all its users, at a cost billed to the plaintiffs (and we know that cost would be low, due to the low cost structure that is at the heart of this whole online revolution). The other defenses mentioned above would similarly falter if raised by AOL, due to AOL's close and ongoing relationship to its own members.

The class described in the AOL case exceeds even the 3 million current AOL members, since it includes all users of AOL for the four year period preceding the lawsuit. This can lead to another, rather interesting defense AOL may raise: even if the claim is valid, it could be difficult or impossible to calculate how much to distribute, and to distribute it to the right people, due to the turnover in class members who are continuously opening and closing membership accounts. Many, perhaps most of the AOL members during the period covered by the lawsuit are likely not members today. Even less of them will be members at whatever time a judge might get around to ordering AOL to pay any damages. The efficiency with which AOL can identify its current members is illusory, if the real project is the impractical task of

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finding former AOL members, at a significant cost per head, in order to give them each a court award in the neighborhood of 25 cents.

The plaintiffs may have lucked out on this score, however, by filing their case in California state court. There appears to be a concept of "fluid recovery" there, where courts do not require that damage awards need to be given to the exact members of the class who suffered the harm. In this case, if AOL is found liable for wrongful billing practices, it could be ordered to pay the damages in the form of a credit to all then-current AOL customers. Most current customers might receive a windfall, while former customers would miss out, but let's face it: we're talking very small sums, on the order of pocket change per head. The real point of such damage awards is to make the overcharging company cough up the extra amounts wrongfully taken from consumers, not to make millions of consumers into instant lottery winners.

By the way, if online credits are the best way to compensate wrongfully charged members — and they are — perhaps credits, instead of cash, should be good for the complaining attorneys as well. If they win any part of their case against AOL, perhaps it would be appropriate to award each of them an amount of personal online time on AOL equal to their legal fee. How long does it take to work down $100,00 in a personal online credit on AOL, anyway?

If there is any real horror in this case, it is not the feigned horror over AOL's billing practices, which comes off as so much cheap theatrics. It is, instead, the almost casual use of the class action procedure as a way to shake down a large online system. What does this tell us about the potential for class actions against online systems in the future?

The news is that class actions can be a new way for outsiders or users to wrest control of an online system away from its owners. Anyone who can represent an entire class of plaintiffs against an online system or BBS can bring a lot more legal might to bear on their behalf. The potential damages to be won in class actions are vastly greater than in most lawsuits by individuals or single businesses, and the costs of defending against class actions are also far greater for the online system.

"Class actions can be a new way for outsiders or users to wrest control of an online system away from its owners."

The most tempting and insidious aspect of the class action is the ease with which it can be pursued against online systems. As we saw above, the defenses traditionally used by other kinds of businesses to fend off class actions are dreadfully inadequate when raised by online systems, especially if they're defending suits by their users. It's just too easy to identify and notify the users of any given online system that they've just become part of a class action suit. It's just too easy to argue convincingly that, since all users of a given system operate under the same terms and conditions, they suffered the same injuries from whatever evil the online system in question is said to have wrought.

An example of the potential misuse can be seen in *Frank Music v. CompuServe*, currently pending in federal district court in Manhattan. This is not strictly a class action, but something similar. It is a lawsuit joined in by about 140 different music publishing companies, seeking to hold CompuServe responsible for copyright infringement because its members traded music files within the CompuServe system. If the court rules in the publishers' favor, CompuServe would be forced to monitor all file transfer areas closely for infringements. CompuServe's existing freedom to run its business as it sees fit would, as a result, be enormously compromised. By suing together as a large group, the music publishers made their case into an industry lawsuit against CompuServe, and thus greatly increased the pressure on CompuServe to make major changes to its business practices to serve the publishers' needs.

A class action suit can create a similar pressure against online systems in many cases, and likely at far lower costs than the Frank Music case. A class action plaintiff does not have to incur the expense of organizing hundreds or thousand of others in a lawsuit. It just has to represent those others as a class convincingly before the court. With this legal technique, an online system user can attack its

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editorial policies, privacy policies, billing practices, security procedures, and just about any other aspect of the system to which the user objects. By exploiting the ready availability of the class action approach to gather together many users with arguably the same relationship to the online system, the litigious user can greatly influence the management of that system from the outside.

Realistically, there are also significant limits to the threat against online systems posed by class actions. One is simple lack of interest and energy. The class action may be easier to sustain against online systems than most other kinds of businesses, but it is a lot of work in any case, and costs a fair amount in lawyer fees. Most irate or opportunistic users will not pursue a high-powered class action lawsuit when they sit down to consider the costs.

Another limit is the discouragement of class actions in federal courts, including a rule against aggregating small damage claims into bigger amounts to meet monetary thresholds for getting into federal courts. This puts much of the class action activity into state courts (such as *Hagen v. AOL*), where questions can be raised about how strongly one state court's judgment can affect class members outside the state, and where the court of a defending company's home state might look more kindly upon it.

Finally, there is a basic defensive tactic that online systems can readily use to head off many potential class actions: a provision in the system's user agreement forbidding class actions against the system. Such a provision might hold up well, or it might ultimately get shot down as some sort of unfair business practice, but in any event it would likely slow down or nullify most attempted class actions against the system.

The class action genie is out of the bottle, and we can't stuff it back in. From this point forward, those with a beef against an online system will have the option of exploring a class action, where they can sue the system not as individuals, but on behalf of many thousands of others. For opening our eyes to this possibility, we can thank some penny wise/pound foolish lawyers, who are now suing America Online for rounding its seconds up rather than down. ◆

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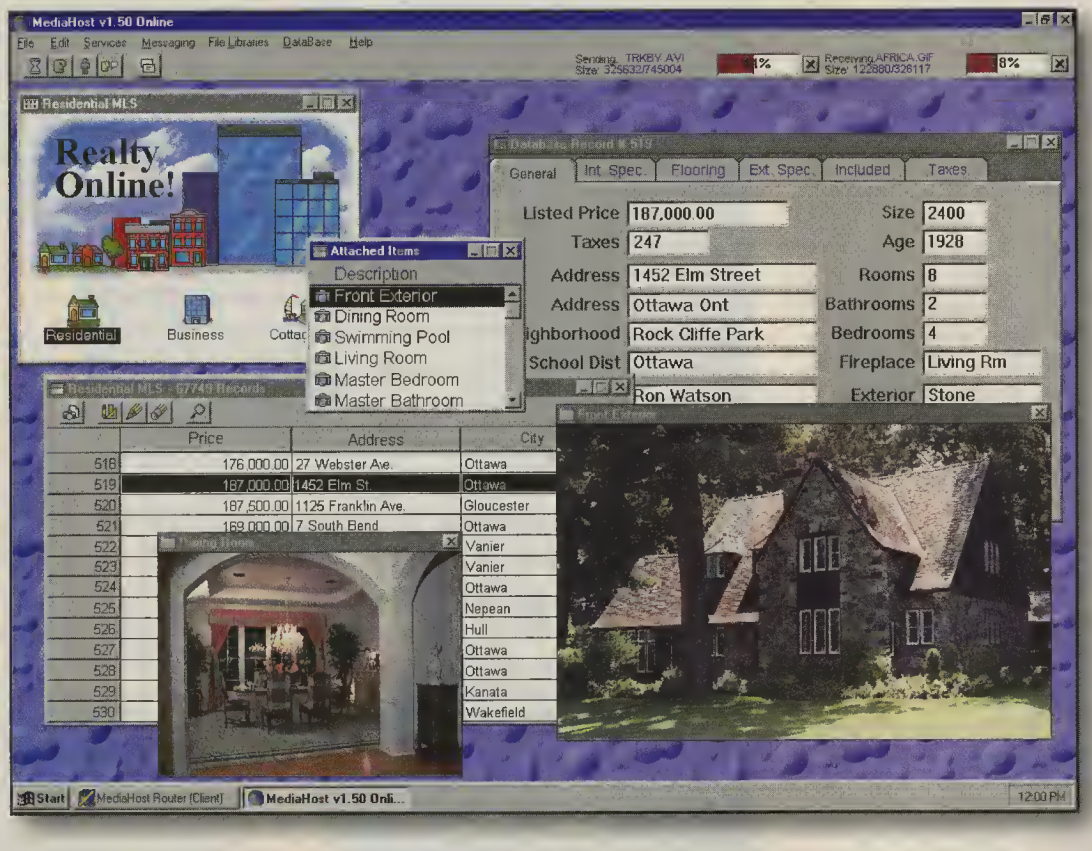
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Boardwatch Magazine, October, 1995 pg. 78

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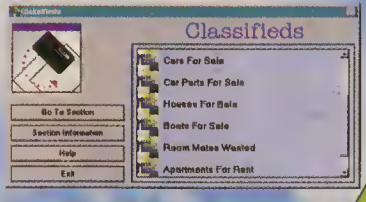
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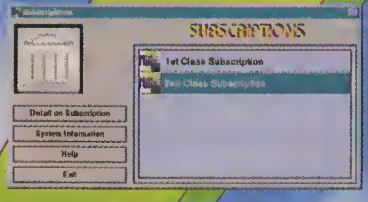
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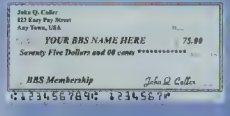


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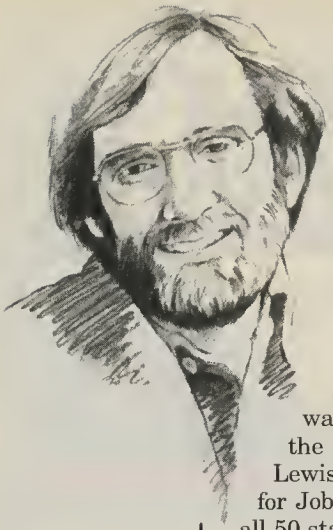
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EDUCATION LINK

by Rea Andrew Redd

"LET'S BUY IT ALL FOR EVERYBODY"

Rea Andrew Redd lives and works in southwestern Pennsylvania where he manages a high school library, teaches European history and Scholastic Achievement Test preparation. On occasion, he reenacts American Civil War battles with the Ninth Pennsylvania Reserves, an historic, military impression unit. E-mail Rea at: **redd@genesis.duq.edu**

An estimated **$32 billion** would be required to buy all the computers, software, and add-ons listed in all the plans of all the state departments of education, according Lewis Solomon, president of the Milken Institute for Job and Capital Formation. Solomon surveyed all 50 state department of education administrators. Peter West reports on this survey in the May17 issue of ***Education Week***. The $32 billion tabluated in this study does not include a computer on every student's desk; that would cost another **$39 billion**.

To raise the money, Solomon proposes a five percent federal excise tax on sales of computer hardware and software to raise about **$5 billion** a year for five years. The $7 billion remainder could be raised by state matching funds and corporate matching funds. Solomon hopes that a groundswell of popular support generated by a small group of dedicated teachers will put political pressures on the federal government to pass such a tax. Solomon acknowledged that sales taxes are generally considered regressive, but he hoped it wouldn't be in this instance. Besides, Solomon said, "... people who buy computers are more affluent than most. It's almost more like a luxury tax than a sales tax."

West also reports that Delaware is spending **$30 million** to establish a Center for Education that will operate a fiber optics telecommunications system to all 7,000 public school classrooms. The program's goal is to have at least one connection for every classroom. Each connection will allow classrooms to exchange telephone and video signals carrying computer data.

OF NANNIES, SITTERS AND CROSSING GUARDS



Controlling children's access to the Internet is a popular occupation these days. The anti-pornography organization, Enough Is Enough, warns that there are no foolproof software safeguards. U.S. congressmen sponsor family empowerment and Internet freedom legislation. The parents' group SafeSurf (**http://www.safesurf.com.wave**) proposes a voluntary rating system.

New products are coming to market. ***CYBERsitter*** ($30; Solid Oak, **(800)-388-2761** or **http://www.solidoak.com**) is for Windows, screens digital images for adult content and has a parent alert register. ***Net Nanny*** ($50; voice **(800)340-7177** or **http://www.netnanny.com/netnanny/**) is for Windows, allows parents to block sexual words and specific phone numbers. ***Internet in a Box for Kids*** ($50; Spry Inc., voice **(800)557-9614**) includes ***Crossing Guard*** which limits content, hours and sites.

If your school district is running into Internet content problems, consider ***theLINQ*** (ResNova, distributed by Quality Computers, voice **(800)777-3542**) which is a server that offers classroom-quality Internet content. If your students use a computer hooked to this provider then there is no chance of their finding adult materials. {See "Education Link," May 1995 for a more detailed description.}

EDUNET

Edunet facilitates an open discussion of educational issues and topics among nearly 500 subscribers. Kayt Sunwood, list operator, hopes that Edunet will help develop a "virtual" mentorship community for educators. Edunet is a mail list, not a news group. Any message sent to Edunet automatically goes to the e-mail box of each member. Edunet is the basis of a qualitative research study of mentorship of educators and future educators over the Internet. Subscribe by sending **mailto:edunet-request@iastate.edu** with the message **subscribe Edunet yourname @youraddress** in the body of the message.

What do 500 educators talk about in Edunet? Problems with principals, with graduate school class projects, with classroom discipline, with sexism, with the philosophy of physical education. For me, Edunet is the professional educator's lounge without the smoke and the gossip.

TIES UPDATE

If you previously telneted to **tiesnet.ties.k12.mn.us** you got close but no cigar. Darrell A. Schulte — **mailto:schulte@ties.k12.mn.us** — advises us to use the following addresses:

- **gopher://informns.k12.mn.us/**
- **gopher://ties.k12.mn.us/**
- **http://www.informns.k12.mn.us/k12links.html**
- **http://www.informns.k12.mn.us/iir.html**
- **http://www.infomrns.k12.mn.us/**



Further questions can be answered by Darrell via fatmail (Technology and Information Education Services, 1925 West County Road B2, Roseville, MN 55113).

WHAT'S UNDER YOUR FEET? WHO'S COMING TO CLASS?

The Denver Earth Science Project and the Earth Science Resource at Colorado School of Mines have changed addresses. Use **mailto:jproud@flint.mines.edu** from now on. The Denver Earth Science Projects now offers an activity book for grades 4-8; earth science activities, maps, puzzles, diagrams and charts.

If you are bringing a scientist or engineer into the elementary or middle school classroom, you should obtain one or more of these books:

Sharing Science with Children: A Survival Guide for Scientists and Engineers

Sharing Science: Linking Students with Scientists

Engineers: A Survival Guide for Teachers

For additional information on these items contact Jim at the above address.

FOR ACTIVIST GOVERNMENT TEACHERS

Teachers who wish to guide students through the process of electronically protesting barbaric political behavior should contact Francis Lau of the April Fifth Action Committee (AFAC) at **mail to:tllau5@hkein.ie.cuhk.hk** or fax them at **852-2394-4383** or send fat mail to April Fifth Action, Front Portion 2nd Floor, 103 Argyle Street, Mongkok, Hong Kong. A sample protest letter is available by e-mail at the above address.

OUT OF THE E-MAIL BAG

Joe Malone — **mailto:JoMalone@Pipeline.com** — teaches Advanced Placement U.S. history at the 11th grade level and government at the 12th grade level. He gave his e-mail address to his AP students to deal with their summer reading schedule and ensuing questions. Malone finds that his high school has 60 computers that are used by the business department to teach computer literacy. There is one modem in the building. Contact Joe with ideas on how he can develop his building's technology situation for his AP history and government students.

Charles Alcorn — **mailto:alcorn@pgh.net** — is working on software for learning disabled students which includes an Internet component; if you have any relevant experiences with this area of instruction then send him an e-mail message. His voice/fax number is **(412)852-1123**.

Nat Kannan — **mailto:kannan@uol.com** — is the President of University Online (UO), which helps schools and colleges to offer interactive distance education via the World Wide Web. A catalog of online courses in math, language, science, business, and technology is available. UO is launching an online high school program with the state of North Dakota that will be accredited nationally and will be available through OU's **http://hq.uol.com** Web page.

Joan Welch — **mailto:joan@savvy.com** — works in a medium sized public library and depends on information from the Internet to supplement the library's book budget. She relates the following story. "Someone takes out a copy of ***Fodor's Israel 1995***, and... the rates for hotels have changed. I gopher into the Ben Gurion University Gopher — **gopher://gopher.bgu.ac.il/** — and from there go into Tourism (to find the information)... I was also able to amaze a patron by giving her a listing of every single Yeshiva and University in Israel, down to which ones were for men, which were for women, and which were for Hassidics, with addresses, telephone numbers, etc. To try and find all that information in books would (have) taken me close to an hour, but thanks to the Gopher, about 10 minutes... She then dragged her husband in and said to him, "See, the Internet is a GOOD thing to have!!"

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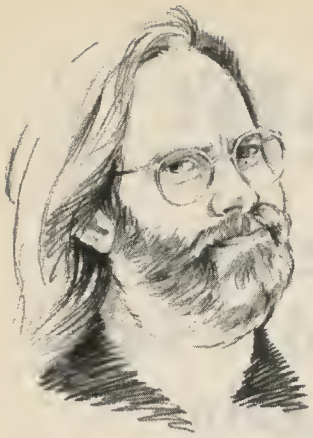
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BEGINNER'S LUCK

by Doug Shaker

MOTHRA NEARLY DIES

There are times when I hate computers and wish desperately to escape them. I want to live in the woods and make things out of wood, clay and stone. I imagine myself as a purer, better person, waking in the pristine wilderness, and staring at the beautiful clear blue sky. I am wrapped in furs and speak only in Tarzan dialog, "Me Doug. Me just woke up. Want espresso! Want double espresso, now!" As you can see, there are some flaws in this scenario, but you know the feeling. Usually these feelings are brought on when my computers fail in new and creatively devastating ways. I have been feeling that way a lot, this month.

Doug Shaker runs a one-person mail-order business supplying Smalltalk software to Smalltalk developers. He started his BBS in early 1995 as an adjunct to his business. He wishes he knew what he was doing, but he sees no chance of that happening anytime soon. You can send Doug e-mail at **doug@smalltalk.com** or you can connect to his BBS at **(415)854-5581**. You may also telnet to his BBS at **bbs.smalltalk.com**. Doug has five modems, four computers, three phones, two children and one wife. They keep him busy.

The month started out normally enough. I was going on vacation and I needed to upgrade the OS version my BBS runs under before I left. I had been having problems with my BBS crashing when there was a lot of Internet activity on it. My BBS supplier, S&H Computer Systems, had found a bug in their Internet code and they wanted me to upgrade to the next version of their operating system, TSX. Since I didn't want my BBS to crash while I was away, I thought I should do the update before I left. Like a good boy, I did a backup to tape before I installed the upgrade. I was kind of short on time before the vacation and all of my past backup tapes had been fine, so I didn't do a verification pass on the tape.

> ***"Screw computers. I want to make things out of sticks and mud."***

After I had installed the upgrade — all eight diskettes worth — I decided to look around and see if all was well. I took a look at a few forums and my e-mail. Everything was fine. I looked at the forums one more time and I found a netnews-based forum that I was interested in but hadn't read for a while — **rec.arts.puppetry**. I ducked in to take a look around and when I tried to read an article, the BBS software told me that I had tried to read a non-existent file. Hunh? What could this be? Something in the forum must be hosed. Oh, well, it is a pretty obscure newsgroup. It could have been screwed up for ages and, as long as no one tried to read it, maybe the BBS software wouldn't notice the problems.

I decided to halt the BBS, boot to DOS, and use the DOS command **scandisk** to clean up the disks. I have two drives on this system. One drive stores the OS and BBS software and the other stores all of the forum messages. Because my system stores netnews newsgroups in forums, the forum files can use up a lot of space. Normally when I run **scandisk**, it finds a few lost files on the OS disk and restores them. I usually look at the restored files to make sure they are junk and then delete them. They are usually some junky temporary files that weren't quite deleted properly.

This time, however, **scandisk** found lots of errors and they weren't just useless temp files. Several forums on the forum disk had errors and — yikes! — my main Internet e-mail file on the OS disk was trashed! I started up the BBS and looked at the e-mail. Ninety percent of the messages had been replaced with some random paragraph from a netnews discussion of CASE tools.

Actually, it wasn't even that sensible. If you looked at any mail message, the first 5 lines came from the CASE discussion and the rest consisted of a single character, usually "N," repeated a few thousand times. My e-mail was hosed. Wow, maybe I should use **scandisk** more often. Or maybe not at all. Is it fixing things or screwing them up? I don't know. I deleted the bizarre messages and brought the BBS back on line.

Everything was fine for a day or two, then I started getting even more bizarre events. I would start the BBS and it would run fine for an hour or two, then die. I would boot it and it would immediately crash again. For a while it would be boot/crash, boot/crash, boot/crash. Then it would be OK again. I noticed that I was always getting a lot of network activity when the system would die.

I started to go through the possibilities —

(**A**) the OS upgrade was a big mistake,

(**B**) someone is attacking my system over the Internet via unspecified and mysterious means, or

(**C**) I have screwed up my system big time.

I called S&H for help. They said more or less what you would expect them to say — that no one else has had these problems with the new version of the OS, but there had been a minor problem with disk handling that might create some **scandisk** errors. They had a new OS kernel that I could download that might eliminate the problem. If I would do a memory dump the next time the system crashed, they would look at it.

I got the new kernel via FTP and installed it. It worked fine for an hour or so, then it was back to

boot/crash, boot/crash, boot/crash. I scanned the disk again and found huge amounts of new problems on the forum disk. I let the system crash again, and dumped the memory to disk. Then I compressed the memory dump and tried to use FTP to get it to S&H. No luck. The system was crashing so often that I didn't have time to upload it before another crash would occur.

Well, by now, it was Friday evening. I was supposed to leave on vacation with my wife and kids on Sunday. The BBS was well and truly f***ed up and the support staff at S&H had gone home. I wouldn't be able to speak to them again until Monday morning, when, unless I wanted to get a quick divorce Sunday afternoon, I would be in the mountains. It was starting to look like the OS upgrade was a very, very, very bad mistake. Using my other computer and a modem, I called up the S&H BBS and uploaded the crash dump for support to look at. I left an e-mail asking them to look at the dump and please, please, please call back ASAP. Then, because the crashes seemed to be related to network activity, I temporarily cut off the Internet connection to my BBS and went to bed.

On Saturday morning, things became a little delicate. My family was packing for vacation and running errands. My seven year-old and my four year-old aren't very good at packing or, for that matter, driving the car. I just couldn't spend all my time doing CPR on my BBS.

Surprisingly, when I got time to look at it, my BBS had not crashed during the night. Cutting off the Internet connection seemed to have helped. I turned on the Internet connection again, and — kaboom! — the system crashed within minutes. I shut off the Internet again, and upgraded the BBS software to the very, very latest version. It ran fine. I turned on the Internet connection and — boom! — it crashed immediately.

I used my other computer and a modem to call the S&H BBS. There was no answer to the e-mail I had left the previous night, so I left them a note saying I would be back-revving the OS and then going on vacation. I went back to the BBS machine and brought it down. I decided to run **scandisk** again, in case the OS was messing up the disk.

Geez, there were hundreds of errors on the forum disk this time. And they weren't just file allocation errors. **Scandisk** found lots of cross-linked files and a surface scan found some bad clusters. If the OS was screwing up my disks, it was doing a great job.

I back-revved the operating system and brought up the BBS again. It ran just fine. I looked around and everything seemed about as good as could be expected. Hopefully, I turned the Internet connection back on. BOOM! The system crashed! Rats! By now, there were no alternatives open to me. There were no more software combinations to try and no available support. I would just have to leave my system off the net and hope for the best. I turned off my Internet connection, left the BBS running and drove off to the mountains.

When I returned from vacation, my BBS was still up. A ray of hope! Oh, Lordy, maybe things just kind of fixed themselves. I turned on the Internet connection and, of course, the system immediately crashed. Oh, well, so much for miraculous intervention. Once more, I booted to DOS and ran **scandisk** on my forum disk. This time it was clear. That disk was gone, dead, gone south, sleeping with the fishies, passed on, gone to a better world and just plain kaput. It was finished. There were thousands of errors on it.

Here is one measure of how bad it was. **Scandisk**, when it is run on a healthy disk, takes ten to fifteen minutes to run. It usually takes a little longer with a bad disk because it doesn't give up on a bad sector until it has tried to read it 64 times. If it fails 64 times, **scandisk** declares it to be dead. My disk was so sick that **scandisk** ran for four hours and was still only 20% of the way through the disk. Dead and gone. I tried a low level format of the disk and even that was impossible. The low level formatting program said the media was gone.

> ***"Everything was gone. I would have to start my BBS all over, from scratch."***

My working assumption, for the previous two weeks, was that the operating system was screwing up the disk. It turns out the disk was dying all by itself. If anything, the disk was screwing up the OS rather than the other way around. The reason that the crashes were connected to the Internet connection is that when the Internet connection was up, the BBS would start to pull down netnews articles. The BBS software would start to write the articles onto the dying forum disk and, get a bad disk pointer or another sort of fatal error. However, if the Internet connection was down, the number of disk operations to the forum disk was so low that it was not a problem and the BBS would stay up. A bad disk was doing me in.

"Well," said I bravely, "I have a backup tape. I will just get a new disk drive, put it in place, and restore from backup." I bopped down to the local computer store where I bought a one-gigabyte HP SCSI drive for **$369**.

Anyway, I brought the new disk home and installed it. Just to show myself that things were better, I ran **scandisk** on all of the disks. The new one was fine, but my other disk, the OS disk, showed 50 or 60 cluster errors. Hmmm. What could this be? One disk can't kill the other. All disks die eventually, but it seems highly unlikely that both would die in the same week.

I called up a disk manufacturer and they said, "Hmmm, our disks usually last for years and years. It sounds like you have a bad controller." OK, but can SCSI controllers kill disks? I called Adaptec and, after calling 80 times at 5:30 am on a Monday morning, I finally got something other than a busy signal. We talked. They said, more or less, "Hmmm, we just send out valid SCSI signals over the SCSI bus and there is no 'savage this disk' signal. It sounds to us like you have some bad disks."

Aw, crap. How am I supposed to decide something like this? I can't. Can I risk another disk on a possibly bad controller? No way. I went out and bought a new controller and a new set of cables. I pulled out all of the old stuff, installed all the new stuff and — CRAP! — nothing worked!

Indignant, I called Adaptec back up and, after half an hour of running diagnostics, swapping cables and flipping dip switches on my new disk, we were about to conclude that my new controller card was faulty. However, while the Adaptec support rep was off conferring with a level 2 expert, I discovered that the controller board wasn't pushed in all the way — it wasn't firmly seated in the motherboard slot. Oops! I reseated the board and tested it. It worked fine. I must have apologized to that guy for five minutes when he returned.

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By this time, I was discouraged, downtrodden, and humiliated. The only positive thought running through my head was, "At least this will be something to write about for my column."

"Sticks and mud!" I thought, "Screw computers. I want to make things out of sticks and mud."

I reloaded DOS and the TSX operating system onto the my new disk and got out the backup tape. I stuck it into the tape drive and typed the **restore** command. I got back — you guessed it — an error message: "**uninitialized media**." It turns out that tapes, under TSX, need to be initialized before they can be used.

Everything was gone. I would have to start my BBS all over, from scratch.

So, in my best trooper spirit, I started to rebuild the BBS. Since I had done it all before and since I had a few configuration files left over, it went fairly quickly. I had some trouble with one part of the software that connects to the Internet, so I called up S&H once more and asked a question.

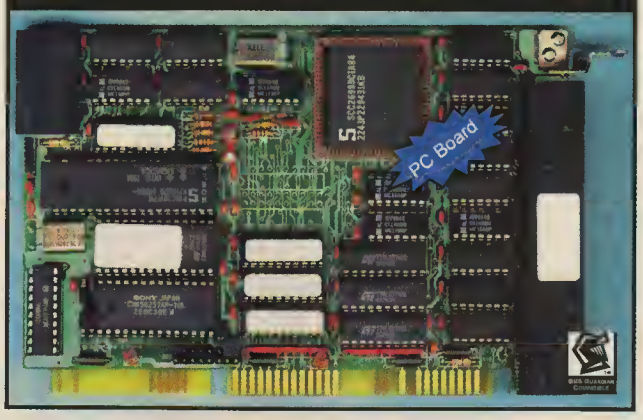
I don't know if I have mentioned it before, but S&H has a really devoted support team. They seem to really care what people do with their software and they want to help as much as possible. I told them the latest installment in my tale of woe. One of the support guys refused to give up on my backup tape and made me mount it in the tape drive. Then he logged in to my BBS and used raw tape commands to position it to the right spot and restarted the restore command. Somehow, he managed to get all the files off the tape.

Then the final blow came. When I made the backup, either I gave the wrong command or a disk error caused it to terminate early. Only the top level directory of each drive was backed up onto the tape. None of the subdirectories had been backed up.

Luckily the user file was saved as was the file library index — I still have my users and I know the names of the files in the file library. Nearly everything else was gone.

You can see why I am not real crazy about computers today — why the idea of living in a cave and making things with sticks and mud has some appeal right now. And, I'll imagine, you can see why I will be making some — ahem — very significant improvements in my backup strategy in the coming days. Go, thou, and do likewise. ◆

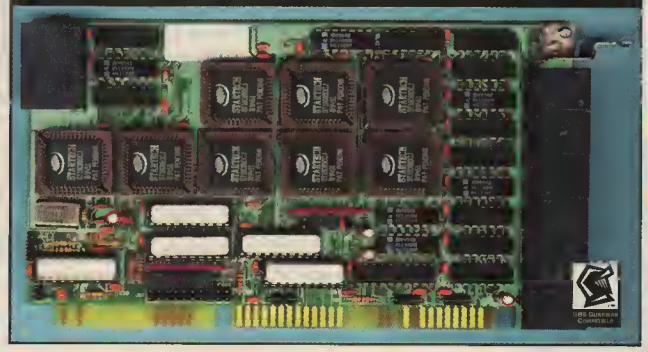
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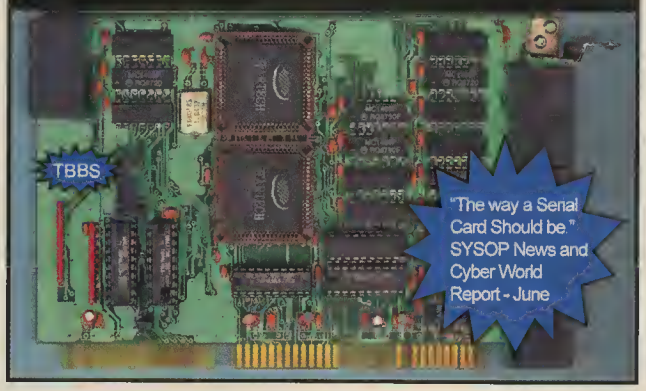
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MACINTOSH NEWS

by Bill Gram-Reefer

KAWASAKI SAVES ECONOMY, CONSIDERS PRESIDENTIAL BID

Talk about productivity gains from using hot computer technology! Have you noticed the U. S. economy picking up? This is not because of anything that Clinton, Congress or Greenspan has done. Nope, we owe it all to Guy Kawasaki. Let me explain.

Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, specializing in connectivity and communications. His Online Services column appears monthly in ***MicroTimes***. His amateurish web page can be accessed at **http://worldview-bbs.com.** E-mail Bill at **reefer@worldview-bbs.com**

OK, let's see how much time you spend every morning checking your mail. One guy I know (his name is Knucklehead) has an America Online account, another on eWorld. He keeps a CompuServe membership as well. On top of all of that he has his own e-mail address through a service provider for Internet mail. Sound like you?

For each of those services there are several distinct messaging platforms. AOL has its own mailing program, as does eWorld and CompuServe (either CIM or Navigator or figure it out online). Of course there is the ubiquitous freeware version of Eudora. That's four (count 'em) different services and four different applications to configure, customize, boot up and run.

So every morning Knucklehead gets to his office easily a half hour before Dilbert shows up in the morning paper, just so he can manually log on to each of these services to check and answer his mail. What a waste of manpower, let alone sack time and a few rounds of Maze Wars with the late-departing janitorial staff.

So along comes Fog City Software headed by Apple Fellow Guy Kawasaki. Their brilliant idea: create one e-mail application that can automatically log on to each of these online services and Internet connections, upload and download mail and attached files, convert files on the fly, place all of the messages in neat little folders, drag and drop, the whole nine yards. ***Em@iler,*** **$89** everywhere. You already know how to use it so I won't go over how to install it if that's all right with you. [Delete boring install story and feature bullets] Anyways, Claris says, "sure, we'll distribute it for you" under some associated label arrangement, like Fog City's hot gangsta rap label dropped by Warner records, and the rest is history.

Just imagine the impact Claris Em@iler single-handedly has had on the productivity gains of the U.S. economy since July! Multiply that daily half hour by two (Knucklehead checks mail twice each working day, this converts units into one hour per day); multiply that by 22.5 (average number of working days in each calendar month); multiply by five months (July thru November); multiply by 200,000 other Knuckleheads (estimate based on: it's a hit; throw in all of the demos floating around; and factor in the Macintosh industry's dirty little secret that everyone thinks they're Guy's bud). If you count your toes the way I do, that all adds up to 22,500,000 work hours saved from the gaping maw of wasted time checking e-mail. Claris Corporation: 5201 Patrick Henry Drive, Box 58168 Santa Clara, 95052-8168. Voice **(800) 735-7393** or **(408) 727-8227**; BBS **(408) 987-7421**



Em@iler

But Clinton (probably the only computer-literate male in America who doesn't consider Guy to be one of his close home boys), sensing an independent threat from Silicon Valley, downplayed Em@iler during a recent press conference claiming, "We appreciate Guy's contribution to the strength of our nation's economy, but if it had been on the Wintel platform, that would've been something really worth hollerin' about."

Run, Guy, Run!

MORE MAC-BASED EASE OF USE FOR WINDOWS

During the WIN 95 rollout coverage in the newspapers, I read a user quote in one article that gushed, "Now I can download a file and play a game at the same time." DUH? Well it looks like Windows users finally get to see what every Macintosh user has known for years: how easy and productive computing can be. Not only that, but now they can also get the benefit of some of the key Macintosh utilities now going cross-platform.



Stuffit for Windows

For instance, in August Aladdin Systems released its freeware ***Stuffit Expander for Windows 1.0*** (Expander). Expander gives Microsoft Windows users an easy way to expand compressed files downloaded from online services and the Internet, including most archive and compression formats like **.SIT** and **.ZIP** files. Expander will also handle **UUNENCODED**, **BINHEX**, and **MacBinary** files in addition to **ARC**, **ARJ**, and **GZIP**.

Special features for the Windows platform include a "watch directory" option, enabling Expander to perform periodic checks of specified directories so that any new files added will be automatically expanded. Users can also set up Expander so that when a particular file is double-clicked, Expander will be the "helping" or associate application used to expand the file. Expander allows for drag-and-drop expansion of files.

Expander provides a tool bar which gives one-step access to Expander's key features, such as expanding, setting destinations for expanded files, and for configuring cross-platform options which greatly improve the ability of Macintosh and Windows users to exchange compressed files from non-native sources. A help system offers special notes for advanced users.

Expander is available as freeware on the Internet and online commercial services. Macintosh BBS sysops should have this file in their utility software section especially since Mac hosts tend to support more cross-platform users who could really benefit from Aladdin's robust technology. Look for Expander on the appropriate software forums on AOL, eWorld, CIS and Internet archives. You can **ftp://ftp.aladdinsys.com/** to fetch Expander. Aladdin Systems: 165 Westridge Drive, Watsonville, CA 95076. Voice **(408) 761-6200**; fax **(408) 761-6206**; **http://www.aladdinsys.com**

INTEGRATED MESSAGING FOR MACINTOSH

CommuniGate, an integrated messaging platform for Macintosh developed by Stalker Software, was released in August. It's an AppleEvents driven client/server that, in its base package, supports 5 LAN e-mail users. Separate modules supporting fax, voice, pager, and Internet mail (UUCP available now and SMTP to arrive fourth quarter) are also freely available. Users can license 25 additional (**$200**) or unlimited (**$600**) LAN users as well as multi-line capability (**$100**). Each of the server modules can be licensed for **$100**. The online versions available for download are free, full-function trial copies with no time limit. Licensing the server and modules simply deletes a "this fax/page/e-mail sent with a trial copy of CommuniGate" message. However, Stalker is encouraging users to go ahead and use CommuniGate, noting that many users who only send messages in-house will not be bothered.

As Em@iler lets users work with one application to contact and transfer e-mail messages from multiple remote services, CommuniGate lets users use one common platform for all messaging (with or without AOCE), letting the small fax, voice, LAN, pager and Internet mail modules all work with each. For instance, a fax could be sent overseas as e-mail addressed to a CommuniGate server in England, which could then route the message as a fax to a local



Communigate

number in Northumberland. CommuniGate can be used in single application mode or as a suite of applications in a standalone environment, or as a fully scalable LAN/WAN enterprise solution. Using the FaxGate and VoiceGate, CommuniGate can be fully customized to provide fax-back and outbound voice telemarketing, as well. Look for current versions of the CommuniGate Server, Client, and service modules in the communication folder on eWorld or AOL, or **ftp://sumex-aim.stanford.edu/info-mac/comm**. For more info contact **mailto:sales@stalker.com** or **(800)262-4722** voice. Stalker Software: 655 Redwood Highway, Suite #275, Mill Valley, CA 94941. Voice **(415) 383-7164**; fax **(415) 383-7461** ◆



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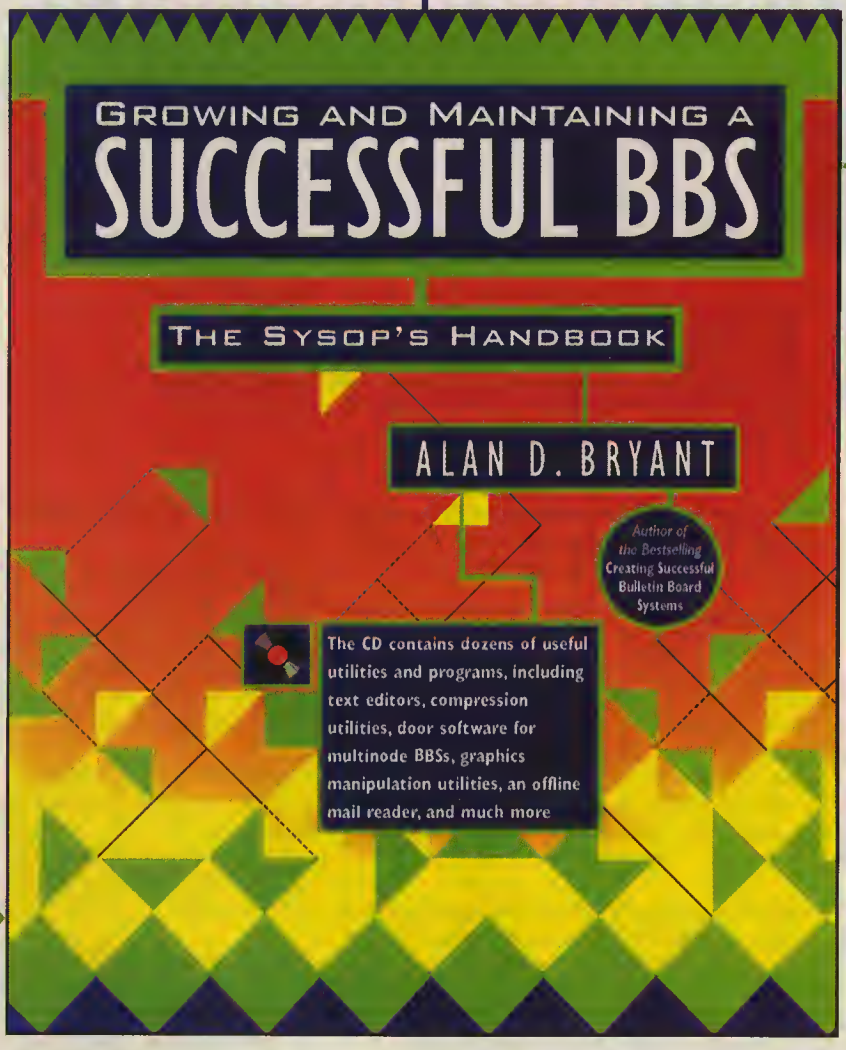
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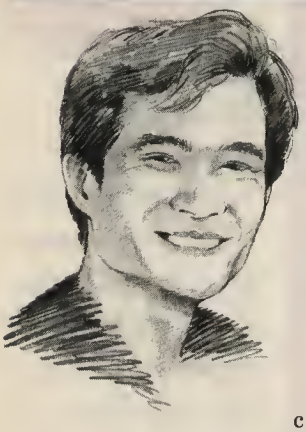
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COMPUSERVE

by Wallace Wang

NEVER-ENDING CHANGES

CompuServe has announced two major changes that may affect the way you use CompuServe in the near future.

First, seeing that simplicity is always best (and that 3 million people wouldn't choose America Online for nothing), CompuServe has adopted the simpler pricing structure of its largest rival. Starting in September, your **$9.95** monthly fee gives you 5 hours of access to any part of CompuServe at no extra charge, including access to the Internet. The minute you exceed your 5 hour monthly allotment, CompuServe starts charging you **$2.95** an hour.

For heavy users, CompuServe offers a frequent user's plan that charges **$24.95** for 20 hours of access to any part of CompuServe. Additional hours will cost you **$1.95** an hour once you exceed your 20 hour monthly allowance. Under both plans, e-mail received from the Internet will no longer incur a surcharge (finally).

WOW! OR WHY?

CompuServe's second change includes pursuing the larger consumer-oriented market, which (not coincidentally) forms the foundation of America Online's subscription base. Starting in early 1996, CompuServe plans to introduce a rival online service, specifically designed to attract computer novices to the joys of online, electronic communication that everybody's been telling them about for years

This new, consumer-oriented, easier-to-use online service is code-named "Wow!" A more appropriate codename might be "Why?" Perhaps CompuServe feels its current online structure is too rooted in the past to change easily, but it seems a bit odd to divide their efforts and wind up with the current CompuServe geared towards more experienced computer users and a second, separate online service geared towards novices.

Wallace Wang is the author of ***CompuServe For Dummies***, ***Procomm Plus for Dummies*** and ***Visual Basic for Dummies*** (all published by IDG Books) as well as ***Surfing The Microsoft Network***, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: **70334.3672@compuserve.com** or **bothekat@aol.com** or **bo_the_cat@msn.com**

KILL A COMPUTER VIRUS

The world's first cross-platform, document-infecting virus is here, and it's already causing havoc among the anti-virus community. Unlike viruses written in assembly language or C, the "Winword Concept" virus was written using Microsoft Word's macro language, which means it can infect Word documents on both Windows and the Macintosh.

The Winword Concept virus works by infecting template files. The moment you open an infected template file, the virus rushes out to infect your Word global template file. The next time you create a new file, the Winword Concept virus infects that file as well.

While this virus doesn't damage any files, it does display an annoying dialog box on the screen, presenting the message No. 1 and a button marked OK. More troublesome is the fact that it won't let you save your documents in any form but as a template.



NCSA InfoSecurity+ Forum

So the next time you share any Word documents by disk or e-mail, watch out. Current anti-virus programs like The Norton AntiVirus or McAfee VirusScan can't detect and remove it so download the **WVFIX.ZIP** (19,456 bytes) file, courtesy of the

National Computer Security Assocation forum (GO NCSAVIRUS).

Since the topics of virus killing, encryption, and disaster recovery require specialists, several sysops participate in running the National Computer Security Association forum, although the two most prominent sysops are Dr. Kabay and Stephen Cobb.

Dr. Kabay began learning assembler at age 15 and wrote FORTRAN IV programs at McGill University for physical chemistry labs, statistics and population genetics modeling. Currently, he is Director of Education for the National Computer Security Association in the U.S. and the security columnist for ***Network World, Computing Canada*** and ***INTERACT*** magazine as well as the author of the college textbook, ***The NCSA Guide to Enterprise Security*** published by McGraw-Hill.

Stephen Cobb took a different approach in his education. In the early seventies, Stephen studied English and Comparative Religion at England's University of Leeds, which is the alma mater of Dire Strait's guitarist Mark Knopfler and the home of the student cafeteria where the Who recorded their "Live at Leeds" album.

After attending graduate school at the very high-tech McMaster University in Canada, Stephen soon dropped out of his doctorate program and emigrated to the United States where he got his first real job — as a debt collector.

This was his first encounter with computers and online information systems, and soon he parlayed his skills into a job computerizing oil and gas tax auditing during the domestic oil boom of the early eighties, where he first encountered microcomputers and spreadsheets. Finding that he could develop within days the same projects that central data processing could barely accomplish in months, Cobb quit a safe government job in 1983, started selling computers, bought his first modem, and opened his first CompuServe account.

Author of the best-selling books ***Using Quattro Pro*** and ***Guide to PC & LAN Security***, Stephen worked with the NCSA for a year and a half, before accepting the full-time position of Special Projects Director along with becoming the NCSA CompuServe sysop.

Assisting Dr. Kabay and Stephen Cobb are several highly acclaimed experts such as Michael Miora, a well-known consultant in the disaster recovery planning area; Richard Ford, a world-famous expert on computer viruses; Randy Nichols, a cryptanalyst and President of the American Cryptogram Association; Win Schwartau, a recognized expert on information warfare; and William Stallings, a highly-regarded author of many books on computer science, security, and cryptography. If these people can't solve your computer security problems, then it's time to switch computers with somebody else and let them take the blame for your disaster.

Although the NCSA attracted highly skilled experts in all fields of computer security, Dr. Kabay and Stephen Cobb recognized that the NCSA needed a better way of serving its membership and others interested in information security. Together, they decided to create a place on CompuServe where anyone could share case studies, insights and knowledge about computer and network security.

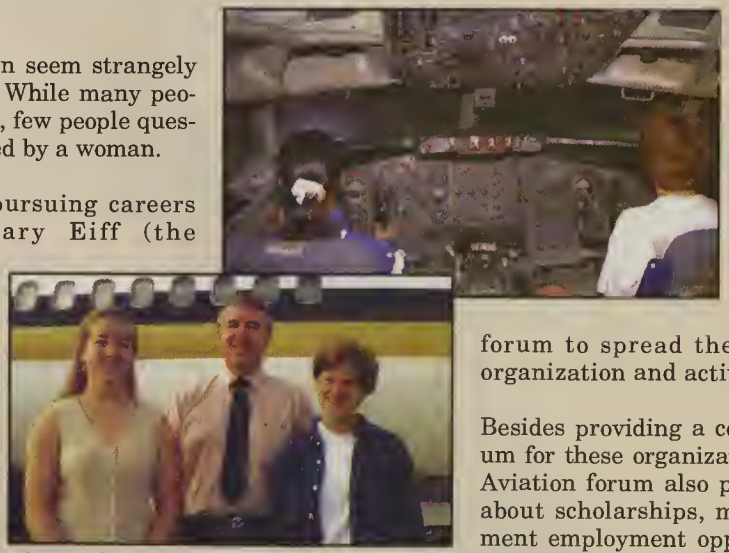
In 1992, they began as a section in the McAfee Forum (GO MCAFEE), and by May 1994, they opened a separate NCSA forum (GO NCSAFO). In the first six months, over 25,000 people visited the NCSA forum, and within a year, this number totaled 40,000.

Stephen credits the rapid growth of the NCSA forum to its dedication to serving the computer community in all aspects of computer security. Current forum sections cover information security (GO NCSAFO), anti-virus products and support (GO NCSAVI), general security products (GO NCSAVE) and a

WOMEN IN AVIATION FORUM

Despite the glamour of flying, women seem strangely excluded from the world of aviation. While many people have heard about Amelia Earhart, few people question why they never fly in a 747 piloted by a woman.

To support women interested in pursuing careers in the aviation industry, Gary Eiff (the Chairperson for the Women in Aviation International Education and research committee) and Lesley Stewart (a Purdue aviation maintenance student) decided to put together their own forum for their organization.



Amy Field (left), Dr. Gary Eiff, and Lesley Stewart

"As a researcher on women-in-aviation issues," Gary says, "I knew that communication between women working in a nontraditional career field like aviation was important to helping them succeed." Gary decided to skip the traditional BBS and develop the forum on CompuServe because of its international scope.

"Because there are so few women in most aviation careers," Gary claims, "they normally don't have an opportunity to know one another locally. And while a lot of specialized 'women aviation' organizations do exist, most are very small. We hoped that many of them would take advantage of the forum to spread the word about their organization and activities."

Besides providing a communication medium for these organizations, the Women in Aviation forum also provides information about scholarships, military and government employment opportunities, and airport and of aviation manufacturing and maintenance careers.

Whether you're interested in a career in aviation or just want to chat and share ideas with people already involved in the field, visit the Women in Aviation forum (GO WIAON LINE) and meet the future aviation leaders of tomorrow, whatever their sex may be.



new forum under construction that will deal with physical security issues (in case you're worried about spies breaking into your office at night).

Besides plenty of interesting text and program files, such as a series of essays about the history of cryptanalysis and information about where to find the PGP (Pretty Good Privacy) program by Phil Zimmermann, the NCSA forum also sports an active message base, covering such hot topics as industrial espionage, sabotage through and of computers and networks, and the military role in cyberspace.

BBS sysops (and callers) may especially be interested in the BBS/SysOp Security message section, which discusses law enforcement officers monitoring BBSs, and the resulting class action suits against extreme police actions such as search and seizure of BBS equipment. Since so many of our political leaders have no idea how to use a supermarket checkout line, yet purport to be educated in passing legislation concerning electronic communication, everyone should learn as much as they can about what the government has done in the past and what they're planning to do in the future that may blatantly violate our rights in the name of peace and security.

To help keep everyone informed on the latest security developments, the NCSA forum also stores archives of important Internet resources such as Computer Privacy Digest, RISKS Forum Digest, and several selected underground publications that reveals the secrets that people use to break into computers.

Although the NCSA Forum may seem technically sophisticated and intimidating, Dr. Kabay and Stephen Cobb pride themselves on the civility and professionalism of the forum. Every message gets read and anyone requesting help receives a reply as quickly as possible. Computer novices are especially encouraged to ask questions and browse through the many files and messages stored in the NCSA forum.

So if you think a virus, thief, or even a so-called law enforcement officer ("I haven't uttered a single racist slur in the past ten years") might be threatening your computer, get help from the NCSA forum right away. You never know what low-down scoundrels might be planning to do to your computer — and those just might be your own government officials. ◆



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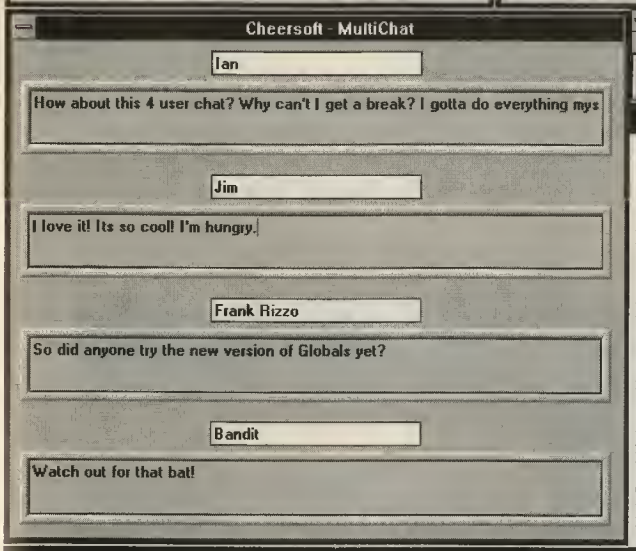
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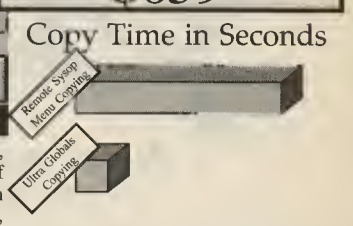


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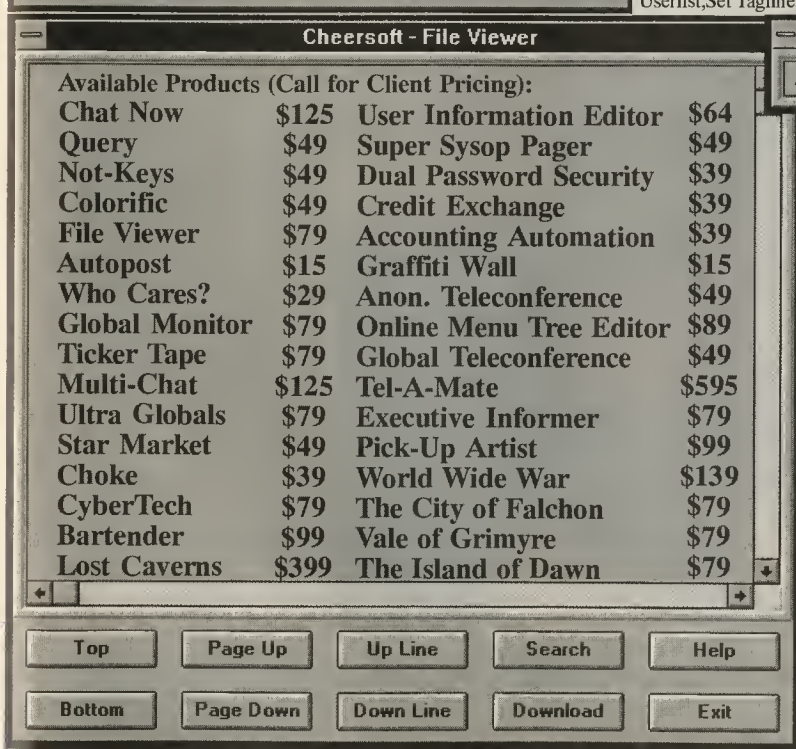
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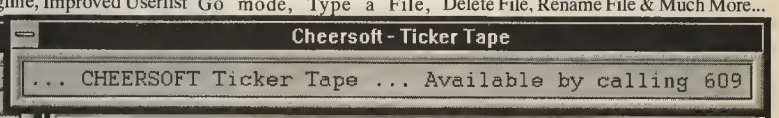
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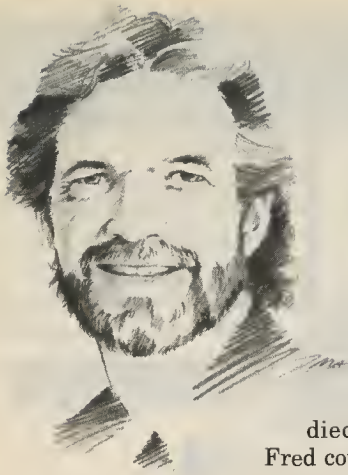
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PRODIGY

by Ric Manning

GENEALOGY BOARD WELCOMES ARMCHAIR DETECTIVES

The story around Kay Metzler's family was that Uncle Fred had died a hero. Folks said that even though Fred couldn't swim, he went into the East River and managed to save someone before he went down.

Metzler always believed the story until she was doing some genealogy research and got hold of Uncle Fred's death certificate. She posted what she discovered on Prodigy's Genealogy Bulletin Board.

"Good old Fred was an escapee from Ward's Island," she said. "He didn't make it."

Metzler posted her family secret in a board area called Black Sheep, a section where users are invited to share stories about how their family research into characters in the family tree who were less than savory.

"Moonshiners, highwaymen, counterfeiters, pirates, ladies of the evening, deserters, horse thieves, et al., are welcome," said Board Leader Julia Case.

Prodigy's Genealogy Board — JUMP GENEALOGY — is one of the service's most popular gathering places. Last year it was voted among the top 10 bulletin boards in the country in Boardwatch's 1994 Readers Choice survey. And it's among the first boards targeted by Prodigy for its expansion of "interest areas" through links to Web pages and chat areas.

Like many of the board's users, Case said she discovered computers and online services long after she got involved in genealogy. "It started out as a hobby about 15 years ago and I just fell down the rabbit hole because I loved it so much," she said. A resident of Virginia, she developed a special expertise in finding records from the Colonial period.

Case eventually took a home study course from the National Genealogical Society, went on to become a course instructor and then a professional researcher. "People started paying me for work and one day I found I could give up my day job," she said.





Case got plugged into online genealogy after she saw a demonstration of GEnie's Genealogy Roundtable at a genealogy conference. She later subscribed to Prodigy and got recruited to manage the genealogy board.

As the board leader, Case works with Myra Gormley, the Prodigy's genealogy columnist and resident expert. Gormley, who writes a newspaper column about genealogy, publishes a separate column on Prodigy and answers more than 100 questions a week from board users.



Genealogy Expert Myra Gormley (top) and Board Leader Julia Case

"I'm their resource," Gormley says of the board's users. "They can ask me almost anything."

"We get a lot of new people," said Gormley. "They're either new to the hobby or to the computer services. But we also get a lot of diehard genealogists who have just discovered the wonders of electronic genealogy."

The advantage of using a bulletin board to help with family research is it gives you the ability to make connections with other people who might be looking for the same records, scouring the same state or region or even following a branch of the same family tree.

"You could research on your own for years and never make contact with a cousin who might be sitting next

Ric Manning writes about business technology, computers and consumer electronics for *The Courier-Journal* in Louisville, Ky. His weekly column called *Home Tech* is distributed to more than 80 newspapers by the Gannett News Service and it's available on the World Wide Web **http://iglou.com/gizweb**

Ric was the founding editor of *Plumb* and *Bulletin Board Systems*, two newsletters that covered the BBS arena in the early 1980s. His freelance work has appeared in several magazines including *PC/Computing*, *Mobile Office*, *PC Week* and *Home Office Computing*. Ric lives in Southern Indiana with his wife, two children and a champion Weimaraner. Write to Ric at **mailto:ricman@iglou.com**

to you in the library," said Gormley. "Online, you can both broadcast what you're looking for and make connections. That's what's really exciting."

Although genealogy is a hobby often favored by older and retired people, many young people are getting interested in their family histories. Gormley said she likes to help new people get started, but they often arrive with unrealistic expectations. "They'll ask 'How do I find a ship passenger's record in New York?' They expect everything to be online. They don't know that you have to know the date and the name of the ship and even then you'd have to go to New York and look up the records," she said. "I think that we'll get all these records digitized. It's just a matter of money. But it hasn't happened yet."

In most cases, people on the board help others find records or make contact with a particular government or research agency. "It's great for making contact with someone in another state," said Case. Sometimes a researcher might even bump into a long lost cousin.

The bulletin board topics include Advice On Using GEDCOM (a universal format for swapping data files among different genealogy software), U. S. and State Resources, Colonial America, Adoption Research, Missing Persons, Genealogy Software and Military Sources.

Other sections help people tracing their family history among ethnic groups or from foreign countries. And the board has sections where people can post notes under family surnames.

Prodigy recently expanded the board's resources by adding a Genealogy Web Page. The page includes links to several research sources such as the site maintained by The Church of Jesus Christ of Latter-Day Saints, The National Genealogical Society Home Page, Xerox's Geographic Name Server, genealogy newsgroups and sites that help with research in other countries.

What Prodigy doesn't have that many Genealogy Bulletin Board users have asked for is the ability to store and transfer files. Gormley said many users say they would like to use the service to swap family trees using the GEDCOM format and to download address lists and other information files.

"Once we get a (file) library," she said, "I think we will be wildly successful." ◆



THE NEW PRODIGY

The Prodigy facelift that we've heard was underway for almost a year was partially unveiled late this summer with the introduction of a redesigned main menu and a few interior pages. Is it the New Prodigy? P2? Son of Prodigy? Rocky VII? It's hard to keep track of the latest buzzwords for Prodigy's metamorphosis.

What it looks like is a cleanly designed Web page with clickable icons and a scrollable collection of link terms. New Prodigy looks a lot like the Microsoft Network, though not as cluttered, and sharper than anything AOL or CompuServe has put on the wire.

One huge improvement that arrived with New Prodigy is the advertising. Most of the ads I've seen are modest-sized logo boxes in one corner of the screen, not the vast billboards that they occupy in areas that are still — what shall we call it? — Old Prodigy.

You bet it's old Prodigy. All those NAPLPS graphics now look like something left over from a failed cable TV experiment or one of those dopey touch-screen kiosks that popped up in the 1980s.

ED SEZ

Maybe we should call New Prodigy "Ed's Prodigy." Edward Bennett, who became Prodigy's president last spring, is taking a much higher profile than Ross Glatzer, the man he replaced, or even the more visible Scott Kurnit, who left the No. 2 post at Prodigy to head the new MCI-Delphi online venture.

Bennett, it seems, is more promotable than either of those gray suits. We knew that Bennett came from the cable industry, where he worked on VH1 and Comedy Central. Now that he's taken to posting weekly letters to members, we know a bit more. For example, Bennett says he is "a guy who likes to pick up an electric guitar and jam now and then" and that he "can appreciate the talent of some new groups like Green Day and Soundgarden."

We also learn that Bennett prefers using a Macintosh and that he's just as frustrated as other Mac users at the slow pace of Prodigy's Mac upgrades. Bennett said a Web Browser and bulletin board reader for the Mac will be released "as early as possible next year" with an online mail product for the Mac arriving in 1996.

"I'm a Mac man myself," he said, "so we're in this one together." ◆



MICROSOFT NETWORK NEWS

by Durant Imboden

The battle is on. As I write this column, The Microsoft Network is signing up new users at a prodigious rate, and new content providers are emerging from private staging areas throughout the service. Will MSN prevail against entrenched competitors like America OnLine and CompuServe? Will Janet Reno's trustboosters protect the Big Three from competition? And is there room for MSN in a marketplace that seems to be turning toward the World Wide Web? Time and ***Boardwatch*** will tell.

In the meantime, let's take a look at this month's featured entrepreneurs on MSN:

COLLECTORS DIRECT NETWORK

The market for baseball cards, Hummel figurines, antique dolls, rare books, stamps, coins, militaria, and other collectibles is probably a good match for the defense industry in terms of annual sales. A recent sports memorabilia show in St. Louis attracted 80,000 merchants and buyers and in Seattle, home of Collectors Direct Network, card shows draw enough enthusiasts to fill the King Dome.

Terry Diener should know. As one of the Northwest's largest promoters of sports memorabilia shows, he had a decade of experience when he and longtime colleague Bud Obermeyer joined forces in early 1994 to create IAM On-Line, Inc.

"Our plan was to establish a BBS that would link collectibles shops together for marketing and trading," Terry explains. "By coincidence, our offices were just half a block from Microsoft's campus in Redmond. We started hearing things about an online service, so we wrote to Microsoft about our plans for a collectors' BBS. Microsoft contacted us in August, 1994 and asked us to be one of MSN's first business partners."

Terry was familiar with the problems faced by collectors in the online world. "When you buy something online, it can be a roll of the dice as to whether you'll get it," he says. "My son has been burned 3 out of 4 times. And if you complain to the online service, they say it's not their responsibility. This makes a lot of people afraid to buy from small merchants online."

Scam artists don't just hurt consumers; they hurt legitimate retailers by discouraging online sales. "To make matters worse, it's amazingly difficult to put your store online with the major services," explains Terry. "It's hard to find people to talk to, the display technology requires a huge investment, and it's expensive to update inventory because the interface has a static design. This means a retailer can only afford to display a few standard items in an online catalog. And on top of all that, the established services keep a large share of online revenues."

Terry's early meetings with Microsoft convinced him that MSN would be much friendlier to entrepreneurs. "MSN's business model is to help companies get online and make money instead of locking them out. The flexible software tools also create a more business-friendly environment."



Terry Diener, cofounder of IAM On-Line,

Having been convinced that MSN offered an opportunity beyond those of existing services or a freestanding BBS, Terry Diener and his partners Bud, Carole, and Jeff Obermeyer put their minds and money to work. They created Collectors Direct Network with the mission of becoming "America's premiere on line collectibles marketplace."

Their plan called for recruiting independent merchants, or "subscribers," around the country. "When we're maxed out, we should have 300 to 400 online

Durant Imboden is a freelance writer who manages the Writing forum in the Arts & Entertainment category of The Microsoft Network. His credentials include published novels, articles, and short stories; fiction editing and staff writing for ***Playboy***; representing authors at a New York literary agency; and freelance copywriting for Lotus, Apple, Northwest Airlines, US West, and other national advertising accounts. When not typing, Durant is a volunteer announcer at local, state, and sectional figure-skating competitions. **Mailto:**`Durant_Imboden_MSN` on The Microsoft Network or `writing@msn.com` on the Internet. The author is not an employee or spokesman for Microsoft.

retailers," says Terry. "Collectors Direct Network will probably be MSN's largest forum from that perspective. We've concentrated on signing reputable merchants who have no-questions-asked returns policies. In fact, we've turned away quite a few retailers who didn't meet our standards."

Collectors Direct Network makes its profit by using a customized online ordering system written in Visual Basic to collect a modest fee on each sale.

"Let's say you're an MSN member, and you want to buy something from Joe's Card Shop," Terry explains. "You click on an icon, and a preaddressed order form comes up. You fill in the blanks, then click a button. The application sends an e-mail to the online retailer and a copy to us. When the retailer processes the order, MSN takes a small cut and we collect our percentage."

Terry expects to use celebrity chats as another profit center, with revenues to come from admission charges or sponsorships. "We've talked with many current sports stars and Hall of Famers, and nearly all of them have agreed to come online. We don't pay fees to the athletes for them, the opportunity is to sell autographed memorabilia through our online retailers. It's the equivalent of an author promoting his book on a talk show."

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MARTIAL ARTS NETWORK

In his free time, Terry Diener is a martial-arts enthusiast. He and his 16-year-old son Josh recently won a pair of silver medals each at the Tae Kwon Do National Championships. This avocation has led IAM On-Line, Inc. to launch a second forum on MSN: the Martial Arts Network.

"The martial-arts area is quite a bit different from the Collectors Direct Network," says Terry. "It's much less retail-oriented. We'll have a maximum of 15 or 20 retailers selling uniforms, equipment, videos, and similar items. Our real emphasis is on building an online community for the more than 4,000,000 students and 20,000 owners of martial-arts schools."

The Martial Arts Network will have a school directory to help students find training in Tae Kwon Do, Karate, and other disciplines. An online academy will provide courses and exams by video for martial-arts enthusiasts who want to study toward their black belts and can't find a local instructor. Rainbow Publications will provide electronic versions of ***Black Belt*** and other magazines, and O'Hara Publications will sell martial-arts books online.

Recently, IAM On-Line negotiated an agreement with Linda Lee Caldwell, Bruce Lee's widow, to construct a "Bruce Lee Auditorium," in the Martial Arts Forum. The auditorium will be used for guest chats with stars like Jean-Claude VanDamme, Steven Seagal, and Chuck Norris. A portion of the admission revenues will be donated to Mrs. Caldwell's favorite charity.

Terry Diener is convinced that both Collectors Direct Network and Martial Arts Network will be a tremendous success on MSN. Microsoft's competitors apparently agree. "We've had contacts from America Online," says Terry, "but we think MSN is going to be huge enough to keep us busy for a long time."

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Mark Williams, Alien Encounters & UFO Forum Manager

ALIEN ENCOUNTERS & UFOS FORUM

Mark Williams is a contract forum manager for The Microsoft Network. Unlike many of his colleagues, he had no experience as a sysop when he applied for a forum manager's job a year ago. What he did have was first-hand knowledge of aliens and UFOs.

"I had my first significant alien encounter when I was 14," Mark recalls. "I was in bed when my grandmother woke up at 4:30 a.m., heard a screeching sound, saw a light filling her bedroom, and looked out the window. She saw a hovering saucer about 35 feet in diameter with a column of glowing air underneath. As she watched, it rose toward the stars and disappeared.

"My grandmother tried to wake me up, but she couldn't. A few years ago, I learned this is a typical experience for people who have been visited by aliens. It's possible that I was taken aboard the UFO and put in a hypnotic state after the aliens returned me to my bed."

Despite his experience, Mark paid little attention to UFOs until he had another close encounter in Arkansas about five years ago. "I was sleeping out in the woods, in a screened summerhouse, when I woke up and heard a deep hum. It sounded like a power transformer, but much louder. A few days later, I read about a wave of UFO sightings in the area that night. And then, two years ago, a friend told me how he and his dad had seen a large flying saucer on that same night, near the farm where I was staying. He said it made a deep hum. That was when I developed an interest in aliens and UFOs."

Mark moved to the Los Angeles area and became a computer consultant. He applied for Microsoft's Windows 95 beta and began testing the new operating system, which included The Microsoft Network, in November of 1994.

"When I got on MSN for the first time, I went looking for UFO-related forums," he says. "There weren't any but there was a 'help wanted' notice for sysops. I got an application, filled it out, and sent it to Rob Michnick at Microsoft."

Mark believes that alien intervention led to his acceptance as an MSN forum manager. "A week and a half later, while lying in bed, I communicated telepathically with the beings — whoever they were —who'd guided me to apply for the Windows 95 beta and MSN. In my mind, I asked: 'If this is meant to be my task in your great orchestrated scheme of things, then why don't you influence Rob Michnick to accept my proposal?' The next morning, Judy Schneider called from Microsoft to say Rob had decided to let me create the Alien Encounters & UFOs forum."

Mark promptly dropped his consulting work and concentrated on building the new forum. With help from Melinda Leslie, a long-time student of UFOs and aliens, Mark contacted the leading researchers and writers in the field.

"The response has been phenomenal," says Mark. "Whitley Strieber, Richard Hoaglund, and all the other big names have agreed to provide guidance and material for their topic areas. When MSN launched on August 24, my forum included still photos from the 'Roswell Alien Autopsy' documentary that was later broadcast on Fox television. David Santilli, the London producer who owns the footage used in that documentary, has agreed to let me turn excerpts from that 1947 film into digital stills and multimedia materials. And Kevin Randall, author of a bestselling book on the Roswell UFO crash, is interested in working with me on a subforum."

Mark expects to supplement his forum manager's pay by creating CD-ROMs on alien and UFO topics. He'll market these works through MSN, keeping 70 percent of the revenues from every sale. He also plans to offer a free monthly online magazine with hot links to mini-magazines that have transaction fees. According to Mark, the bulk of his profits will be used to expand the forum's content. "All I need is a place to live and $200 a month for food," Mark says. "My goal is to reach other people who have had alien experiences, and to help researchers get the word out on this important subject."

To get the word out efficiently, Mark relies on MSN's point-and-click sysop tools. "I know several sysops on CompuServe, and they have nowhere near the freedom and flexibility that I have on the Microsoft Network," he claims. "With MSN's icon-based tools, I can create subforums and change their properties on the servers whenever I want. New objects show up instantly on users' screens around the world."

Mark is also excited by MSN's ability to maintain databases on alien- and UFO-related topics. "A Microsoft programmer who hangs out in the forum is creating an SQL database application on his own time," says Mark. "We'll have databases for member interests, sighting reports, magazine articles, and other topics. Both researchers and casual members will be able to locate material instantly, using interactive forms."

MSN's ease of use is something that Mark enjoys highlighting during voluntary demos at a local CompUSA store. "One of the hottest things about MSN is the way you can right-click on the mouse and choose 'Explore' instead of 'Open,'" he says. "In seconds, you can explore the entire tree to find something and click on the folder you want. You can't do this on AOL, CompuServe or any of the other services."

Finally, Mark is convinced that MSN's flat-rate access via the Internet will soon create new opportunities for users, forum managers and independent content providers. "When members can explore MSN for 15 or 20 cents an hour, they'll really have time to enjoy this graphical interface and the many things MSN has to offer. Just as important, forum managers and ICPs will be able to make a living by serving users' interests instead of relying on a share of hourly connect charges." ◆

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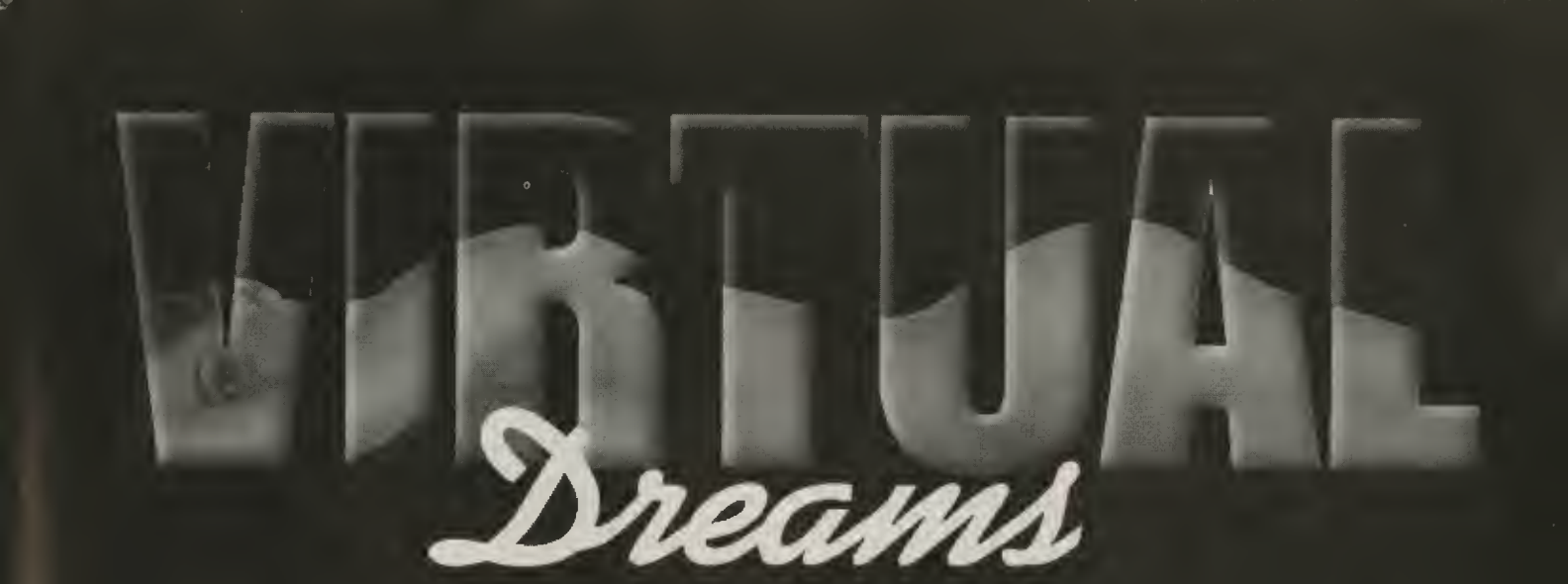
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DIRECT DIAL

by David Hakala

LIQUID SKY: THE BEST OF SEVERAL WORLDS

It's no longer unusual to find a BBS sporting dialup and telnet access. Quite a few BBSs also have complementary web sites. Several thousand sysops now offer client/server GUIs as well as the familiar ASCII/ANSI terminal mode. But it's still a bit mind-boggling to find all of the above in one online system. ***Liquid Sky Publications*** – **(303)443-1692** data, **telnet://liquidsky.com** or **http://liquidsky.com** — is such a place. Set your terminal mode to ANSI/BBS or try your luck with the Worldgroup client/server interface.

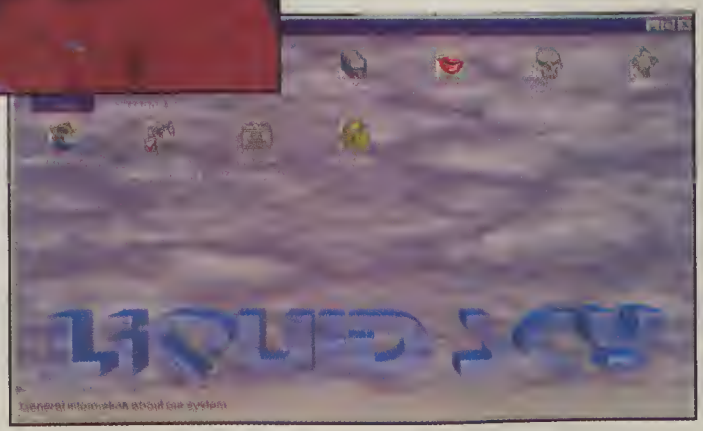
David Hakala first appeared in *Boardwatch* in February, 1989. From May of 1991 until he assumed the position of Editor at Fault at *BW* in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book *Hot Links* with Mark Eppley, CEO of Traveling Software, and penned his own book, *Modems Made Easy*, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at **mailto:david.hakala@boardwatch.com** or at **(303)973-6038**.



Ty Babcox, Liquid Sky Sysop

Sysop Ty Babcox, age 32, built Liquid Sky in two and one-half years, starting with one line and VBBS software. Today, the system has 22 dialup lines and 8 telnet links, making it one of the largest and most accessible systems in the Denver/Boulder, Colorado metroplex. He offers subscribers just about everything one could look for: local and FTP file libraries, games, local and MajorLink chat, USENET newsgroups and MajorNet conferences, MUDs and outbound fax, even dial-out service to other BBSs and SLIP/PPP accounts. Babcox constantly adds new services, including the Worldgroup client/server system from Galacticomm.

Over 2000 patrons make Liquid Sky a going concern. About 14 percent of all callers are women. As one might expect of a BBS in a college town like Boulder, the crowd is fairly young; 40 percent under age 19, and another 33 percent between ages 20 and 28. Babcox says he gets "a lot of really good kids... many (are) shareware authors eager to upload" their work for the world to enjoy. Babcox imposes no age limits or heavy-handed rules list; instead, he welcomes the chance to mentor younger modem–maniacs.



"Sometimes, a teenager posts something he shouldn't," like a phone- or credit-card number, or commercial software. Then, says Babcox, "I'll call him voice and explain why it's very uncool to do things like that... and how lucky he is that I called him" instead of the police. Repeat offenders are rare.

Babcox would also make a good career mentor for many amateur sysops we know – the ones who seriously undervalue their hard-earned skills. Ty started his one-line BBS with the conscious intent of cultivating marketable skills. After about one year, he started inviting business people to inspect his system and learn what he could do for them. He also asked for referrals in e-mail correspondence with business people; "If you know anyone who's thinking about going online, please send them my way."

Nordby International, a nationwide supplier of custom financial data and consulting services, contacted Babcox as a result of such word-of-modem self-promotion. Ty coolly negotiated a deal that many sysops wouldn't dream of requesting. Nordby funded an upgrade for Liquid Sky, made Babcox Director of Online Services and gave him a $40,000 salary. Babcox is designing an Internet presence for the company that will support up to 400 simultaneous IP connections. He's gaining even more valuable experience with Sun workstations, Netscape secure commerce products and other high-performance tools.

Yet Ty still enjoys running a "basic" entertainment-oriented BBS, and helping novice users explore the online world. He's a sysop for all seasons, and an outstanding example of what one can do with "homebrewed" expertise. ◆

THIS MONTH'S LIST: 176 WORLDGROUP SYSTEMS

Wondering what a client/server BBS looks like? This month's list gives you a chance to find one in your local calling area, or one to which you can telnet. These low-cost options are recommended, since you will spend about an hour downloading client software, icons and custom applications before getting a peek at the server side of things. That's just the nature of client/server technology, rather than a reflection on any particular vendor of client/server solutions.

Galacticomm, Inc., introduced its Worldgroup client/server package in May, 1995. Approximately 6000 of Galacticomm's 22,000 customers have partaken of Worldgroup as of September. The majority of these systems are privately branded, marketed directly by their hosts to selected groups of customers. Compaq Computers, for example, doesn't want anyone on their Worldgroup technical support system who is not a registered user of their products.

Most of the estimated 2000 publicly accessible Worldgroup systems are upgraded Major BBS boards. Historically, public Major systems tend strongly towards adult-oriented, chat, sales/customer support and community-information applications. The Worldgroup systems in the following list seem to continue that tradition.

This list is updated on an irregular basis; it can be retrieved from the Galacticomm demo system — **(305)583-7808** modem; **telnet://gcomm.com** to get there. From the main menu, enter /GO WGROUP to display the list. Turn on your capture log first; you can't download the list. ◆

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List of 176 Publicly Accessible Worldgroup Systems

The list below represents Worldgroup customers who have submitted listings for their publicly accessible systems. If you would like your system to be listed here, please leave e-mail to Lisa Kelley, **mailto:lkelley@gcomm.com**

ONLINE SERVICE NAME	PHONE #	INTERNET ADDRESS
Datatronics BBS	+32/2 6728888	
Students BBS	+39/6 5816434	students.rpilo.it
DataComm Online System	+41/61 3119193	datacomm.ch
HRC-net	+49/69 97685028	
Habitat! BBS	+50/6 2336606	
MetroNet	+58/61 923765	
Nemesis BBS	+61/3 93311055	
Cynosure	+65/8633500	
Rock Pile BBS	201/941-7778	rockpile.com
Computer Telephony BBS	201/993-0864	ctbbs.dialogic.com
CyberComm Enterprises	203/228-3143	
Power House BBS	203/268-1275	
Fairfield Community Connection	203/335-4073	fcc.com
Express Line	203/622-9304	
Monty's Python	203/956-0655	
NFocus	205/351-7339	199.190.93.2
Collector's Net	206/329-9397	199.190.104.2
Sierra BBS	206/644-0112	bbs.sierra.com
Virtual Connections	206/899-2428	
Skowhegan Internet Access	207/858-0417	
After Hourz BBS	208/343-0036	ahbqs.com
RealNet BBS	209/384-2868	
ACE InfoSystems	209/833-0291	aceinfo.com
A Pseudo Laissez-Faire BBS	212/254-8000	computrs.com
Communication Specialities	212/645-8673	166.84.190.10
Metro Online	212/876-3031	nycmetro.com
DownTown BBS	213/484-0260	dwntwn.com
CyberMall	214/732-9237	
Cybercom BBS	215/721-7426	
AccessASM Online	216/338-5140	bbs.asm-intl.org
PC Boradcast	219/933-7322	
Orion BBS	250/693-5365	
bbs.adsinc.com	301/695-9116	bbs.adsinc.com
Liquid Sky BBS	303/443-1692	liquidsky.com
APX	303/721-9999	
Floating Pancreas BBS	305/424-0266	sfpg.gcomm.com
BSI Support BBS	305/434-5619	bsitech.com
Agadez Online	305/454-3459	
UNIX Demo System	305/583-1759	unix.gcomm.com
Art's All Adult BBS	305/584-4080	
StarGate Online Service	305/628-9977	sgbbs.gate.net
ACCESS Online Service	305/725-1001	
Logic Circut	305/726-3849	logicom.com
Land of Dementia	305/753-3223	
Bagel Land	305/929-8011	
Pleasure Cove BBS	305/977-8882	
Techno Source BBS	305/984-0581	
TDS Online International	309/668-0017	dstar.com
Miller's Party Board	310/815-0117	mpb.com
Investors Market BBS	312/207-0484	iepstein.com
Elysian Fields	316/267-5125	castle.elysian.net
Beyond Online	316/496-2020	
Megasphere	317/273-9666	
Absolute Connection	317/861-9333	A-C.In.Net
Esoterica - Online Alchemy	360/943-4842	
RI Online Shopping Mall	401/783-0248	
Nite Hawk Information Service	403/246-3860	
Malum Information Network	403/449-6400	198.73.176.242
Nucleus Information Service	403/541-9400	nis.nucleus.com
MarketSpace	404/998-7505	min.com
IntheNet OLS	405/447-1121	inthenet.com
Phoenix Consulting Online	405/527-1838	phxcon.com
MEC Online Gateway Service	407/334-0184	meadwood.org
New Power B.B.S	407/750-7665	np.newpower.com
Infinite Space Online	407/856-0021	ispace.com
LingNet BBS	408/242-6120	lingnet.army.mil
NetWork Resource BBS	408/286-4227	
MELCOM Online!	408/365-0555	
Atlantis BBS	408/377-8510	atlantis-bbs.com
SynerChat BBS	408/929-1980	Chat.net
East Coast Connection	410/391-3633	
Ultimate Dimensions	412/869-3551	
Innovative Group BBS	412/922-7251	bbs.innovgrp.com
Crystal Barrier BBS	414/457-8399	bbs.delta-eng.com
InfoComm Network	414/529-9816	
Urbanite BBS	415/528-6602	bbs.urbanite.com
Bridge	415/749-3311	
SportsNet Interactive Online	501/732-6806	
Technology Services Online	502/887-1179	
Rose City OnLine	503/251-6969	rosey.com
KEEP BBS	503/343-5015	
Blitzkrieg Information BBS	503/758-5448	blitzinfo.com
NW Christian InfoNet	503/788-7962	
Big Easy	504/821-2700	bigeasy.com
DataSafe Support BBS	505/294-1575	dsafe.com
CCS World	508/477-8211	ccsnet.com
Interlect	514/376-5060	interlect.com
Telemat	514/458-0136	
Power Shift BBS	514/486-2899	bbs.pshift.com
Wingham Online	519/357-3615	wingham.com
FIX	519/357-3615	the-fix.sos.on.ca
Fire House Inn BBS	520/578-4150	fhouse.org
Rippers BBS	520/768-7515	bbs.rippers.com
Rock Garden	602/222-3000	garden.hvs.com
Arizona InterActive Systems!	602/951-8379	azi.com
Hobitron BBS	604/338-2316	
CityLynX BBS	604/535-9846	
Intermax	606/441-5517	
Castle Rock BBS	608/755-1147	
CyberCity USA	609/890-6347	
Legends Online	610/377-8115	

ONLINE SERVICE NAME	PHONE #	INTERNET ADDRESS
Tundra BBS	612/436-3029	
Business Information Service	613/258-1560	
KOS BBS	613/544-6448	bbs.kosone.com
Rose Solution	614/878-8360	
VIP Online	615/255-6485	viponline.com
Knoxville News-Sentinel NewsNet	615/673-2077	
Blue Velvet's BBS	615/893-6633	
Phoenix Online	616/392-8175	phxbbs.com
HyperLink Customer Support BBS	616/791-7312	
Music Biz BBS	617/277-1996	
IMPosium BBS	617/376-0909	
APCi BBS	618/628-2724	bbs.apci.net
Online Information Access Network	618/692-4747	oia.net
ADAMS Dymanic Storefront	703/716-1256	
Charlotte Sports Online	704/598-7800	
Game Room on the Lake BBS	704/664-6742	grotl.com
Cabarrus County Schools	704/786-7910	
athensnet.com	706/549-8128	
Party Line BBS	707/542-3193	
Wild Onion	708/993-0461	
Island Connection	709/639-7565	
Compaq Download Facility	713/378-1418	
TechExpress.BBS	713/583-0064	techexpress.com
Paradise BBS	713/597-4000	pplnet.com
Ice Castle Online	713/722-5400	
Helix	713/998-5600	helix.xiii.com
FSU BBS	714/579-7022	
Interludes	714/828-7093	bbs.hwsys.com
Grapevine BBS	716/235-7740	gv.com
InterLoop	716/663-5667	
Cardinal Support BBS	717/293-3074	
Endless Mountain CyberSPACE	717/836-7223	emcyber.com
After Hours BBS	718/547-4210	
Afra-Span Network	770/270-1649	afraspan-net.com
Starbase Atlanta	770/934-8735	
Menu's On-Line	770/953-6368	menus.atlanta.com
Ships Self Defense BBS	800/881-7737	ssdbbs.navy.mil
FastLane BBS	801/479-5010	flbbs.com

ONLINE SERVICE NAME	PHONE #	INTERNET ADDRESS
Desert Jewel BBS	805/397-2063	dj.kern.com
California BBS	805/733-7131	Calbbs.com
Maui Gateway	808/875-4188	mauigateway.com
Instant Access	809/431-9511	
Neal & Massy Corporate BBS	809/675-8083	
Behavorial Health Network Online	812/232-4089	behavnet.com
infoNet BBS	813/541-4636	infousa.com
PCS Online Services	813/795-5992	bbs.pcsonline.com
Bradford Information Net	814/368-8318	
SuperHighway Online	814/443-6151	
ErieNet	814/456-7544	squirrel.erie.net
Worldreach Entertainment	815/389-3113	
GenStar On-line	817/933-3304	206-.26.67.1
Info-Tainment BBS	818/718-1600	
Annex! On-Line	818/779-5600	annex.com
Shadowscape	901/382-5972	
CyberLink of Daytona	904/238-0538	
ICA Canada On-Line	905/276-9894	204.92.238.195
Outer-Net Communications System	905/420-8846	outer-net.com
Worldgroup Fairbanks	907/455-8995	
Softworks Network	907/522-2900	softwork.com
HighWaterMark BBS	908/249-7139	
Cybercom Online	908/506-7637	cybercom.com
HoT SpoT BBS	908/571-4666	
Global Travel Solutions BBS	908/647-2600	
Carolina Online	910/738-5968	
Wildd Cardd Entertainment	912/236-0083	wce.com
Access One	913/263-0410	access-one.com
One Crossroads Place	913/663-1100	198.69.223.38
AppleWize OnLine	914/793-5060	
BasinLink	915/570-9999	basinlink.com
Athenon BBS	916/343-7866	bbs.athenon.com
CyberVillage BBS	916/678-0857	
INFO*NET Information Service	941/277-3909	imt.com
TNT Online	941/337-5999	tntonline.com
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Cross-Wordz C/S	$ 239.95	Client/Server Developer's Kit	$ 279.95	Major Goose	$ 100.00	POS Dial Module	$ 250.00
Global Actions	$ 39.95	Internet Connectivity Option	$ 750.00	Menu Magician	$ 100.00	Super Hangman	$ 49.00
Hearts	$ 39.95	X.25 Software Option	$ 699.95	Menu Magician C/S	$ 150.00	VisaMan™ C/S	$ 199.00
Horse Track RIP	$ 129.95	Dial-Out Add-on Option	$ 132.50	Metakeys	$ 50.00	VisaMan™ MBBS	$ 149.00
Instant Lotto	$ 29.95	Search and Retrieve Add-on Option	$ 132.50	Newsroom C/S	$ 80.00	AMS DOS Shell	$ 99.00
Jumble Madness	$ 89.95	Fax/Online Add-on Option	$ 164.95	Online Checks Direct	$ 100.00	Chat-on-Demand	$ 99.00
Liar	$ 39.95	Major Gateway/Internet Add-on Option	$ 164.95	Scrybe WG	$ 49.00	City Search	$ 39.00
Log Master	$ 39.95	Shopping Mall Add-on Option	$ 164.95	Spot C/S (download only)	$ 60.00	Game Connection	$ 249.00
MicroMind	$ 39.95	The Major Database Add-on Option	$ 382.95	Trade Wars 2002	$ 400.00	Gate Keeper	$ 39.00
Mouse Trap - Maze Game	$ 39.95	Entertainment Collection Add-on Option	$ 164.95	EZ-Fax C/S	$ 59.00	Happy Birthday	$ 49.00
Ultima 2000 Ouest for the Holy Grail	$ 249.00	Fax/Online Developer's Kit	$ 99.00	Fax Importer C/S	$ 119.00	Line Monitor	$ 49.00
Pig	$ 39.95	Extended C Source Developer's Kit	$ 329.95	FTI-Fax Protocol	$ 149.00	Mail Link	$ 149.00
Roulette C/S	$ 129.95	Dial-Out C Source Code	$ 259.00	Major Agenda	$ 149.00	Mail Link Plus	$ 179.00
Tic-Tac-Toe	$ 19.95	Search and Retreive C Source Code	$ 259.00	M.I.D.A.S. C/S	$ 179.00	MajorNet Registry	$ 89.00
Trivia Forum C/S	$ 149.95	Entertainment Collection C Source Code	$ 319.00	Multi-Vue C/S	$ 149.00	Match Maker	$ 179.00
Video Blackjack C/S	$ 99.95	Shopping Mall C Source Code	$ 319.00	Vue-It C/S	$ 99.00	Mega Madness	$ 49.00
Video Poker C/S	$ 99.95	The Major Database C Source Code	$ 649.00	Linux Developers 4 CD Rom Set	$ 29.95	Mine Field II	$ 59.00
WorldLink Cross-Wordz	$ 49.95	CD Express	$ 49.95	Linux Getting Started Book	$ 24.95	Online Employment	$ 119.00
WorldLink Jumble Madness	$ 29.95	File Library Extension C/S	$ 149.00	Linux Combo	$ 49.95	Pulse	$ 69.00
WorldLink Package RIP	$ 99.95	Major CD C/S	$ 129.00	Dr. Linux Book over 1100 pages	$ 39.95	Remote Console	$ 99.00
Yahtzee	$ 19.95	Major CD LAN Option	$ 89.00	56K DSU DIM	$ 250.00	UserBase	$ 99.00
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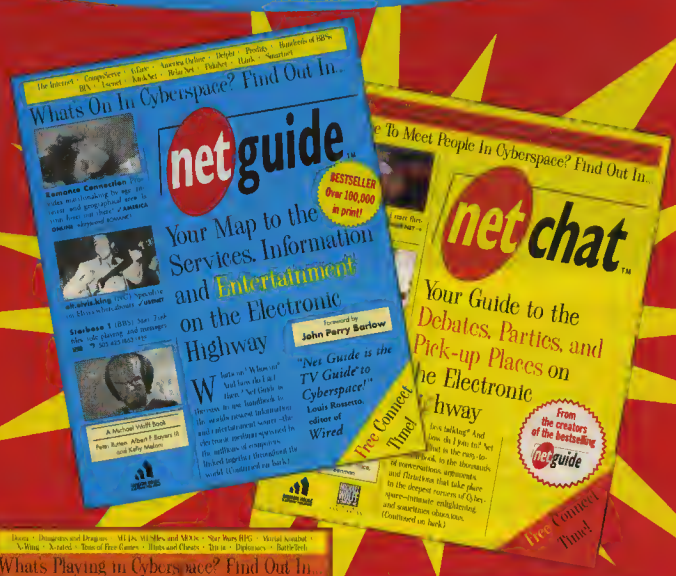
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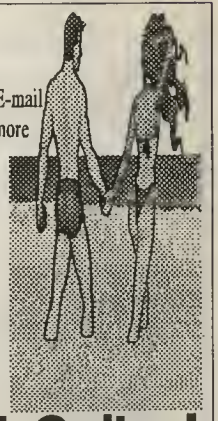
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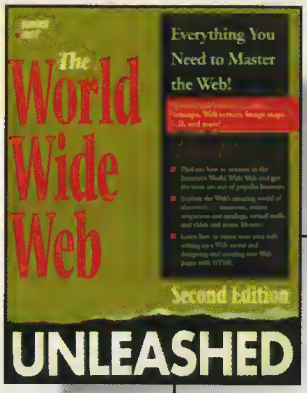
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BOOK BYTES by L. Detweiler

A GRANDMASTER'S TOUR OF THE WEB

The World Wide Web Unleashed, 2nd Edition
By John December & Neil Randall, et. al.
1995, Sams.net Publishing, **(800)428-5331**
ISBN 0-672-30737-5 1346 pages, **$39.99** US

"The Internet was cyberspace for the elite; the World Wide Web is cyberspace for the unwashed masses." (-Anonymous)

Two words come to mind in appraising this tome: herculean and encyclopedic. John December was working as a Ph.D. student in Communication and Rhetoric at Renssalaer Polytechnic Institute in New York during the explosion of the World Wide Web. What started as December's hobby of tracking the uses of the Internet evolved into one of the most comprehensive compilations of Internet resources available. December made his work available on an FTP site and in FAQ form ("List of Computer Mediated Communications Resources," **http://www.rpi.edu/~decemj/cmc/center.html**). This list has grown and earned December his reputation as a "one man Yahoo."

The scope and polish of this book reflect December's high standards of excellence. ***WWW Unleashed*** is arguably the best book on the subject at the moment. However the book is only about half written by December; it is comprised of about 50 chapters and mini-essays by himself, co-author Randall, and other contributors. Randall and all other writers have impressive resumes as well (several are authors of other Internet and Web books); each writes about his/her area of expertise, giving the presentation a crisp, "real world" flavor. The result is a mammoth 1346-page tome that is well organized and cohesive.

- Part 1 (~60p): Introduction to the World Wide Web (Internet, multimedia, hypertext, a guided tour)
- Part 2 (~240p): Web Browsers and Connections (graphical, nongraphical, Netscape, Mosaic, platform-specific: X Windows, Mac, OS/2)
- Part 3 (~200p): Web Navigation Tools and Techniques (Web structure, browser operation, navigating, keyword searching, surfing, trees, subject-oriented guides, spiders, and indexes)
- Part 4 (~250p): Exploring the Web (Business and Commerce, Entertainment and the Arts, Education, Scholarship and Research, Science and Technology, Communication, Publishing and Information, Government and Communities)
- Part 5 (~250p): Weaving a Web (Planning, analyzing, developing, designing a web site, HTML, CGI, Imagemaps, HTML editors and filters, Web design, a case study)
- Part 6 (~30p): Setting Up and Administering a Web Server (HTTP behind the scenes, installing a Web site, server software for UNIX, Mac, OS/2, and Windows)
- Part 7 (~200p): Trends and Issues (Challenges for providers, publishers, and society, surveying and navigating the web, the future of Web commerce, Web conferencing)
- Appendixes (~100p): Web Reference, Net Directory, Glossary, Index

Hundreds of Netscape screen shots almost excessively illustrate the book. The size of the book is partly due to all the screen images and the spacious layout. This highly visual, "right brain" style makes this a good book for someone who has never seen the Web and is technophobic or skeptical of what it has to offer.

Randall covers the introductory topics and conveys the exciting history and development of the Web, from Berner-Lee's original proposal to the sexy "killer apps" that define the Web (Mosaic, Netscape, etc.). The book also helps the reader avoid newbie *faux pas* such as mistaking USENET for the Internet, etc. December is well aware of the subtleties of human communication; he masterfully articulates the subtle do's and don'ts of web design. The down-to-earth case studies and examples of web site design, illustrated from concept to implementation, are highly effective. Randall and December attempt to paint the "big picture" of the Web's future in the final chapters. They offer sober, thoughtful perspectives on the future of the Web and its effect on society.

We would have liked to see more than the minimal treatment given to Windows NT. There are probably better deals and coverage on the more technical aspects of the Web, such as server management, HTML language idiosyncrasies, server programming, etc. The treatment of the HTML language specifics is somewhat lacking; instead of good tables and expository discussions of all the elements, there are a few sample HTML documents that have all the tags thrown in as examples.

Note! Be sure to buy the second edition of this book; it contains more current information than the first edition, including coverage of new topics such as Netscape, CGI programming, Imagemaps, server software, and Web site management.

Overall, this is an outstanding treatment of the World Wide Web, and will likely become an influential (if not definitive) compilation of WWW lore. It may well have far-reaching effects upon the evolution of the Web and its impact on society. ◆



DVORAK ONLINE by John C. Dvorak

A ROUNDABOUT ODE TO CHARACTER MODE COMPUTING AND THE CHARACTER MODE BBS

It's about time someone defended character mode computing. I have no straightforward way of doing this, so watch how I manage it. First, an anecdote to get you in the mood.

When I'm bored or looking for attention I write something — anything — disparaging about the Internet. Newbies to personal computing (many having been in mainframes or whose only introduction to computers has been Internet-related) come out of the woodwork to condemn me for suggesting that the Internet is not perfect. These people see it as a god-send; a road to freedom; a dream come true; and, probably, a substitute for real life. The fanaticism alludes me and is reminiscent of that found amongst die-hard Amiga users (still). I suggest that the WWW is inefficient and that having a 10 megabit connection will probably get you 56 kbps download speed (if that) and the letters pour in. Here's the logic these people assume:

"Even if I get a fast connection established most of my time is spent "Attempting to Contact Site."

"Hey, Jim how is the system running off our T-1?"

"Great! We have about a hundred callers backed up."

"Hey, Jim, wait! There's a guy in Pennsylvania with a cable modem. Oh man, he wants to download the whole system. Screw all those other users GIVE THAT ONE GUY ALL OUR BANDWIDTH! He's so cool!"

I had written in ***PC Magazine*** an essay claiming that the cable modem is a joke if for no other reason than the fact that the cable people can't get me a clean line anyway. In my house in Washington State I have TCI and the cable reception is a joke, especially after a rain. Somehow I'm going to run a high speed connection on this buzzy line. I think not.

But even if I get a fast connection established most of my time is spent "Attempting to Contact Site."

So I've been going around the country giving speeches and talks about the Internet and other technologies and have concluded that maybe one person in 10 who knows about the World-Wide-Web understands that it's a page server and that the user is never online with the Website except for that short moment where the page is delivered. There is a certain practicality to this since most users sit and stare at a screen or two before doing anything else and there is no reason to be online during this phase. But if it takes 30 seconds or longer to recontact the site to get to the next "page" it becomes a tedious process. And, of course, it's impossible to charge for connect time when you are never really connected except for a moment.

The advantage to this is that more users can be served. The disadvantage is that intense interactivity doesn't work well. It's like hanging up the phone after each sentence then redialing over and over to make a conversation complete. A bulletin board system is a superior system for real interaction, but this notion seems to be lost in the shuffle. The media in particular has pretty much stopped talking about BBSs even when they are porno boards. Now everything is the Internet and the Web. But when I need that elusive device driver to make some equipment run on my system, what do I do to get it? The first thing we all do (or should do) is find out the phone number for the BBS. Chinon, Adaptec, IBM, Western Digital, Triton, Diamond. Everyone has a BBS system serving up device drivers, bug fixes and needed utilities. You can do this with a Web page too, but it tends to be more cumbersome.

The point is that the old character-based Internet (newsgroups, etc.), the World Wide Web, traditional BBSs, and commercial online services all have their place and should be able to co-exist with and without some hybridization. The hybrids include the Software Creations BBS on the Web, Prodigy on the Web, the AOL and MSN web browser, etc.

I mention this coexistence because something was said to me at ONEBBSCon that I found disturbing. This person, matter-of-factly, said BBSs were dead, especially with the power of Hot Java making it possible for the Web to do everything a BBS could do. I was thinking about this when I called the Chinon BBS to get some drivers for my digital camera. You have to dick around in the files section to find the file and with the web it would take forever with too much recontact of the Web site necessary. It's just not efficient when real interactivity is needed. To be interactive on the Web the site has to be an interactive hybrid. If the Website is a hybrid then it's really a BBS with a Web front-end and net access. SO how does this need for interactivity make the BBS "dead?" It doesn't. The same net-heads like to think AOL, CIS and Prodigy are dead meat because, with some work, you can do just about everything on the net that you can do on

In addition to his weekly syndicated radio call-in show, "Software/Hardtalk," syndicated newspaper columns, magazine writing for *MacUser*, *PC Computing*, *DEC Professional*, *Information Technology*, and his featured "*Inside Track*" column in *PC Magazine*, Dvorak is the author of several best-selling books,including *Dvorak's Inside Track to DOS & PC Performance*, *Dvorak's Guide to PC Telecommunications*, and *Dvorak's Inside Track to the Mac*.

these commercial services. Well, not quite, but you can do a lot. What amuses me is that since the coinage of the term Information Superhighway around 1992 and the subsequent mass interest in the Net all the online services have boomed. Even Prodigy is making money, if you can believe that. AOL subscriptions have jumped from one million to three million.

I recall years back when there were only two services' Compuserve and the Source — both struggled. I even had a forum on the Source where columns were posted. Eventually the Source was bought by Compuserve and dismantled. Years went by and people always wondered if these so-called Information Utilities would ever make any real money. Now there's mania.

There were two triggering mechanisms: 1) the usage of the Information Superhighway term as used by Al Gore, 2) the graphical user interface combined with pretty pictures. I don't think there is any denying that the GUI is an absolute necessity for the success of these systems, at least as far as the general public is concerned. I still prefer my Compuserve access to be in character mode because it's much more efficient to navigate CIS this way. While there is no doubt I'm in the minority with this kind of thinking, I will argue that character mode is superior in some applications.

There is no firm evidence that BBSs or commercial online services will not grow and benefit from the Internet/Web boom. Furthermore for many practical applications the BBS is still the best solution, even if only in character mode. I look at character mode computing kind of like comparing books to magazines. Magazines are prettier and more colorful, but there is still a huge demand for the "text-only" book. I see no reason why this parallel won't continue in the world of computing.

Whew! ◆

Dvorak's Recipe Nook

BEAR LAKE RASPBERRY SABAYON

Looking for something to knock them out at the end of your Thanksgiving feast? Reader David Lawrence went to the Grand Teton Lodge to celebrate the 11th Anniversary of his first date with his wife Ronni and fell in love all over again. Only this time it was with this dessert. The recipe was given with personal permission of Robert Walton, Executive Chef, Grand Teton Lodge Company, Grand Teton National Park, Moran, Wyoming.

Bear Lake Raspberry Sabayon

1 cup Sugar
1 cup Egg Yolks
1/4 cup Chambord (Raspberry Liquer)
1/2 cup White Wine
Red Food Coloring (3 Drops)

Heat in a double boiler until hot; stirring with a wire whip. When hot, add 1/4 cup Chambord. Transfer to a mixer. Whip on second speed while adding wine and three (3) drops of red food coloring. Continue whipping until double in size.

Place approximately 12 Raspberries in the bottom of a serving glass. Add Sabayon (mixture) and chill. Garnish with fresh Raspberries and whipped cream.

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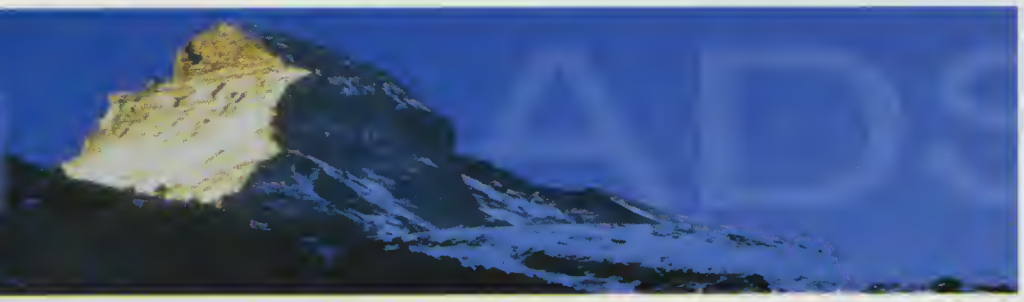
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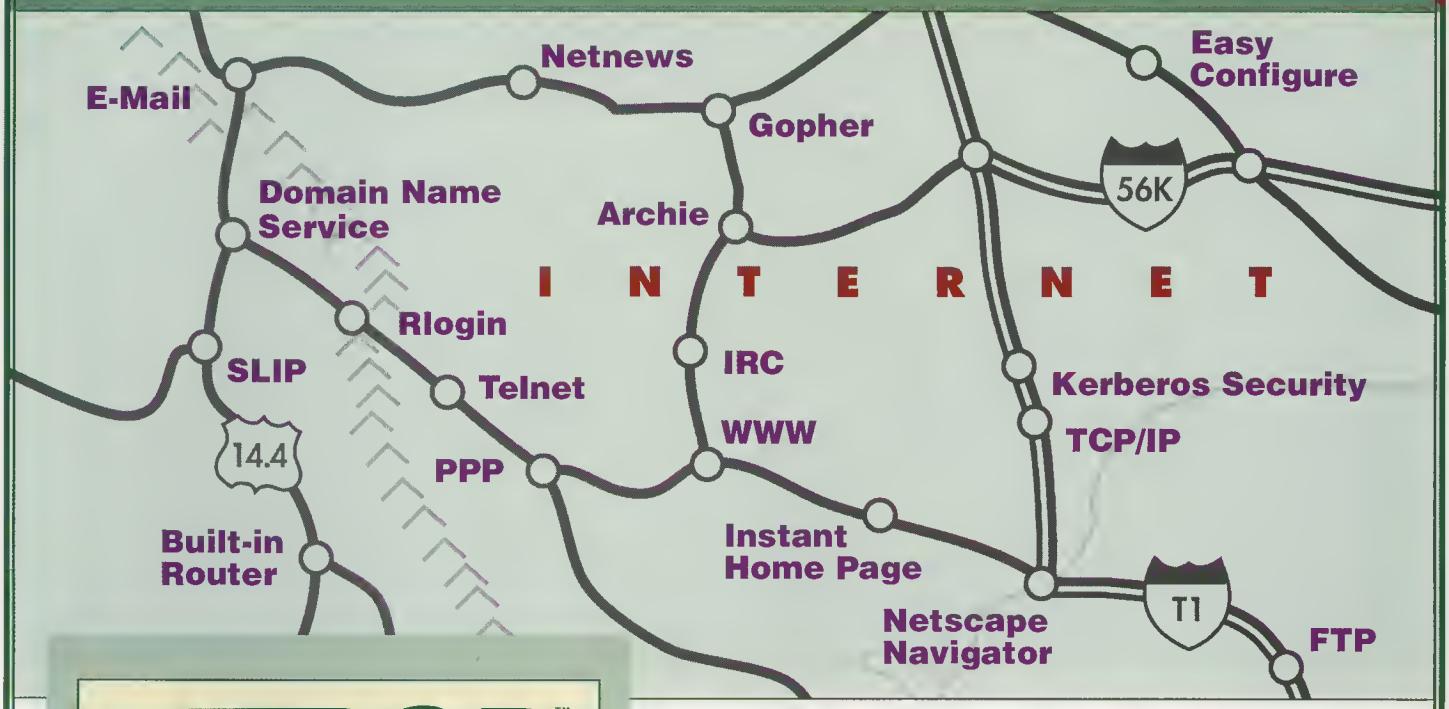
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BSD International (Europe)
+44 1227 781675
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